Report of the Commissioners of the District of Columbia

1889-1890

(Washington, DC)

THE

EXECUTIVE DOCUMENTS

OF THE

HOUSE OF REPRESENTATIVES

FOR THE

FIRST SESSION OF THE FIFTY-FIRST CONGRESS.

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ANNUAL REPORT

OF

THE COMMISSIONERS

OF THE

DISTRICT OF COLUMBIA

FOR

THE YEAR ENDED JUNE 30, 1889.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1889.

ANNUAL REPORT

OF THE

COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

OFFICE OF THE COMMISSIONERS,
DISTRICT OF COLUMBIA,
Washington, November 30, 1889.

THE PRESIDENT:

The Commissioners of the District of Columbia hereby submit, pursuant to the requirements of the organic law of said District, a report of the official doings of the District government during the fiscal year ended June 30, 1889.

They refer to the accompanying reports of the subordinate officials of the District for the details of those transactions.

Pursuant to the practice of their predecessors, based, as they are advised, upon the expressed wishes of members of committees of Congress intrusted with the preliminary consideration of District matters in that body, they also submit a summary of the more important features of those reports, with their comments thereon, and recommendations for Congressional action deemed by them desirable to facilitate the administration of municipal affairs in the District.

RECEIPTS AND EXPENDITURES.

The following statement exhibits the receipts and expenditures of the District during the year, according to the various sources of revenue and the heads of appropriations:

RECEIPTS.

Balance on hand July 1, 1888	$1,356,093.16
Repayments to appropriations	23,890.39
General taxes, including penalties	2,009,164.56
Licenses	157,579.94
Markets	18,164.34
Rent of District property	2,515.75
Fines	35,562.94
Fees for tax certificates	2,534.00
Permit fees for sewers and gas	4,081.00
Building permits	8,499.63
Dog tax	6,975.10
Pound fees	503.00
Material furnished	37.58
Sale of old material	719.79
Labor and sale of products, Reform School	1,470.22
Fees for inspection of gas and meters	392.00
Surplus from sale of contractors' guaranty bonds	1,792.41
Engineers' licenses	2,116.85
Sale of horse of Washington Aqueduct	9.00
Chesapeake and Potomac Telephone Company, repairs to streets	2.80
J. Dugan, damage to street lamp	2.37

Use of steam-roller	$24.00
Judgment in case William Barnes *vs.* District of Columbia	7,637.75
Advertising	4,408.00
Water taxes and rents	246,454.13
Washington special tax fund	13,078.20
Washington redemption fund	3,039.27
Redemption of tax-lien certificates	588.20
Redemption of assessment certificates	740.72
Guaranty fund, act of June 11, 1878	46,352.55
Policemen's relief fund, act of February 25, 1885	7,974.49
Firemen's relief fund, act of February 25, 1885	1,390.57
United States appropriations	2,546,673.84
Total on hand and received	**6,510,468.87**

EXPENDITURES.

Improvements and repairs	$650,583.24
Permit work	109,757.59
Bridges	20,011.86
Washington Aqueduct	20,007.40
Washington Asylum	57,441.54
Transportation of paupers and prisoners	3,658.45
Relief of the poor	16,708.25
Hospital for the Insane	97,968.00
Reform School	36,696.00
Building, Reform Schools	14,130.70
St. Ann's Infant Asylum	6,000.00
Maintenance of Church Orphanage	1,500.00
Building, Church Orphanage	4,000.00
Industrial Home School	11,500.00
Columbia Hospital for Women and Lying-in Asylum	15,000.00
Building, Columbia Hospital for Women and Lying-in Asylum	10,900.00
Women's Christian Association	5,000.00
National Association for Colored Women and Children	10,000.00
Children's Hospital	5,000.00
Washington Hospital for Foundlings	7,600.00
St. Rose Industrial School	5,000.00
Association for Works of Mercy	5,000.00
National Homœopathic Hospital Association	6,500.00
National Temperance Home	2,500.00
Central Dispensary and Emergency Hospital	12,250.00
Salaries and contingent expenses, offices	168,647.24
Expenses of assessing real property	12,083.45
Streets	419,780.30
Sewers	122,077.33
Metropolitan police	381,568.57
Buildings, Metropolitan police	18,804.53
Fire department	127,887.18
Buildings, fire department	11,884.50
Telegraph and telephone service	20,812.93
Courts	14,980.63
Writs of lunacy	2,000.00
Pay of referees, Court of Claims	850.00
Public schools	619,943.01
Buildings and grounds, public schools	363,257,85
Health department	43,558.04
Emergency fund	3,774.04
Interest and sinking fund	1,213,947.97
Miscellaneous expenses	26,427.66
Judgments	11,882.51
Bridge over Rock Creek at Woodley lane	29,427.35
Deficiency in sale of bonds retained from contractors	1,078.34
To maintain public order	7,577.67
Payment to F. H. Bates, military instructor at High School	300.00
Redemption of sewer certificates	110.00
Water department	308,239.14
Refunding water rents, etc	1,209.69
Guaranty fund, act June 11, 1878	54,161.44
Refunding taxes, etc	4,773.27
Washington special tax fund	8,011.29

Redemption of tax-lien certificates	$389.54
Redemption of assessment certificates	551.47
Washington redemption fund	3,017.35
Policemen's relief fund	5,714.48
Firemen's relief fund	1,245.00
Total expenditures	5,147,686.81
Balance on hand July 1, 1889	1,362,782.06

The above balance is divisible as follows:

General expenses, District of Columbia	$1,328,263.44
Contractor's guaranty fund	5,476.17
Policemen's relief fund	10,174.19
Firemen's relief fund	2,480.84
Washington special tax fund	9,538.89
Redemption of tax-lien certificates	4,344.29
Washington redemption fund	898.20
Redemption of assessment certificates	292.00
Redemption Pennsylvania avenue certificates, act July 8, 1870	117.05
Redemption Pennsylvania avenue certificates, act July 19, 1876	176.03
Filling grounds south of the Capitol, under various acts	191.07
Sales of property in Washington and Georgetown, act March 3, 1881	449.12
General expenses of the District, act March 3, 1875	292.31
Surplus fund	87.50
Fire department, act June 22, 1874	.49
Bureau of Engraving and Printing and quartermaster's corral, sewers, act March 3, 1887	.47
Total as above	1,362,782.06

SURPLUS REVENUES.

The amount of revenue derived from taxes and other private sources in excess of expenditures authorized by appropriation, and chargeable to those revenues and available from appropriations subsequent to June 30, 1889, was on that date $656,172.81.

DEBT.

The Treasurer of the United States, who is charged by law with the management of the bonded debt of the District, reports that that debt on June 30, 1889, was as follows:

Statement of the funded indebtedness of the District of Columbia and late corporation of Washington.

Description of bonds.	Act authorizing issue.	Date of maturity.	Amount registered.	Amount coupon.	Total.
Of the District of Columbia:					
Permanent improvement.	Assembly, July 10 and Dec. 16, 1871.	July 1, 1891	.....	$2,886,650	$2,886,650
Water stock	Assembly, July 20, 1871.	Oct. 1, 1901	.....	354,000	354,000
Market stock	Assembly, Aug. 23, 1871, and June 19, 1872.	July 26, 1892	.....	44,900	44,900
Permanent improvement.	Assembly, June 23 and 25, 1873.	July 1, 1891	.....	443,900	443,900
Water stock	Assembly, June 26, 1873.	July 1, 1903	.....	15,000	15,000
Fifty-year funding	Congress, June 20, 1874, Feb. 20 and Mar. 3, 1875.	Aug. 1, 1924	$11,983,000	2,050,600	14,033,600
Twenty-year funding	Congress, June 10, 1879, and June 8, 1880.	July 1, 1899	325,000	545,400	870,400
Of the late corporation of Washington:					
Three-year (Emery)	Congress, July 7, 1870	July 30, 1873	.....	100	100
Twenty-year funding	Congress, May 8, 1872	July 1, 1892	.....	904,400	904,400
Thirty-year funding	Assembly, District of Columbia, June 20, 1872.	Nov. 1, 1902	.....	589,100	589,100
			12,308,000	7,834,050	20,142,050

Statement of the funded indebtedness of the District of Columbia, etc.—Continued.

Description of bonds.	Interest.			
	Rate.	Coin or currency.	Payable.	When due.
Of the District of Columbia:	*Per cent.*			
Permanent improvement.	6	Coin	Semi-annually	Jan. 1 and July 1.
Water stock	7	Currency	do	Jan. 1 and July 1.
Market stock	7	do	do	Jan. 1 and July 1.
Permanent improvement.	7	do	do	Jan. 1 and July 1.
Water stock	7	do	do	Jan. 1 and July 1.
Fifty-year funding	3.65	do	do	Feb. 1 and Aug. 1.
Twenty-year funding	5	do	do	Jan. 1 and July 1.
Of the late corporation of Washington:				
Three-year (Emery)	7.03	do	do	Interest ceased.
Twenty-year funding	6	Coin	do	Jan. 1 and July 1.
Thirty-year funding	6	do	do	May 1 and Nov. 1.

Stocks and bonds outstanding on which interest has ceased, there being funds for the payment of the principal and interest deposited in the United States Treasury.

Corporation of Washington, 10-year bonds		$150.00
Corporation of Washington, 5 per cent. general stock		1,340.01
Corporation of Washington, 6 per cent. general stock		3,480.17
		4,970.18
Debt on July 1, 1878	$22,106,650.00	22,106,650.00
Increase by issue of 3.65 bonds	917,500.00	
Increase by issue of 5 per cent. funding bonds	1,092,300.00	
	24,116,450.00	
Decrease by operation of sinking fund, and otherwise	3,974,400.00	
		20,142,050.00
Net reduction of debt		1,964,600.00
Interest charge July 1, 1878	1,015,759.12	
Interest charge June 30, 1889	878,601.40	
Net reduction of interest charge		137,157.72
Total issue of 3.65 bonds to date (issue being limited by law to $15,000,000)		14,660,750.00
Amount retired		627,150.00
Total outstanding as above		14,033,600.00

No portion of the bonded indebtedness of the District was incurred under the present form of government, which went into effect June 30, 1878.

FLOATING DEBT.

The only floating debts of the District are obligations in the nature of judgments of the courts, which could not have been anticipated, and minor items of current expenses, which were not adequately provided for by appropriations. These obligations are small in amount and are not unpaid because of lack of means on the part of the District, but because the Commissioners are prohibited by law from making payments not authorized by appropriations. They occur from year to year and are liquidated by deficiency appropriations annually made by Congress.

WATER SUPPLY DEBT.

The District is required, under a construction of the act of Congress of July 5, 1884, to pay one-half of the principal of and interest on the amount advanced by the United States, under acts of Congress, as the District's

proportion of the expense incurred in constructing the tunnel and appurtenant works designed to increase the water supply. This advance is repayable in not less than twenty-five annual installments, with interest thereon at the rate of 3 per cent. per annum, computed annually on the principal sum remaining unpaid. The Treasurer of the United States in his annual report to the Secretary of the Treasury on the sinking fund and funded debt of the District, furnishes the following figures respecting this account:

Total amount advanced by the United States on said account, to date of this communication	$2,179,555.72
Half of which to be refunded in twenty-five annual installments	1,089,777.86
Amount repaid in four annual installments	171,809.31
To be paid the United States in twenty-one annual installments	917,968.55

ASSESSMENT OF GENERAL TAXES.

The general assessments made for a number of years past have been, in many respects, objectionable. The system under which they have been made has not allowed sufficient time, nor provided for the most suitable agencies, for the doing of this complicated duty. Under this system the District of Columbia is divided into not exceeding twelve subdistricts. One person is appointed in each of said districts to assess the real estate therein. These assessors must make the assessment in three months and then act as a board of equalization. They are required to finally complete the assessments and equalizations in two months after making their assessment returns and report their conclusions to the Commissioners. The valuation so made and equalized constitutes the basis of taxation for three years, except that it may be increased by adding taxable property omitted or reduced by omitting buildings subsequently destroyed and property exempt by law that may have been assessed for taxation. These subassessors receive $5 per day each as compensation for a maximum term of one hundred and fifty days. They are each required to give a bond in the sum of $2,000 for faithful discharge of duty.

Although the assessment of real property for taxation is one of the most intricate subjects connected with the administration of public affairs, this law seems to imply that it can be done by such persons as the District authorities can secure for temporary service. The consequence has been so far unsatisfactory, and the Commissioners anticipate no different results in the future from persistence in this method.

It may be added that, but for aid given by the clerks of the permanent assessor, to the prejudice of their own duties, the defects in these assessments would have been more numerous and embarrassing. Persons at all familiar with the subject-matter are very seldom unemployed, and it is very manifest that those in regular employment will not abandon it for work known to be temporary and also full of difficulties and vexation.

In the judgment of the Commissioners, the system of making general assessments of real property every three years is a good one. It enables property owners to foresee the amount of taxes they will be called upon to pay and to provide for them a reasonable time in advance, and is frequent enough to secure for the District all the benefits of the healthy appreciation in land values.

These assessments, as well as personal assessments, should be made by permanent assessors, who should devote all the time necessary to that duty, with a tenure of office that would secure to the public the value of their experience and skill; and who should give such bond and

receive such salary as would enable the authorities to employ and retain in that capacity the continuous services of responsible and able citizens.

The permanent assessor, the auditor, and the computing engineer should be created a board of appeals to modify, with the approval of the Commissioners, the assessments so made, by the correction of clerical errors and unjust assessments, which may appear from time to time, and discharge such other duties germane to the levying of municipal revenue as the Commissioners may intrust to them. The Commissioners will prepare and submit to Congress during the present session a bill embodying their views in the premises.

The assessment for the general taxes is as follows:

Washington:		
Taxable on land	$64,458,603	
Taxable on improvements	55,155,000	
		$119,613,603
Georgetown:		
Taxable on land	2,703,921	
Taxable on improvements	2,691,100	
		5,395,021
County:		
Taxable at $1.50 on land	6,464,253	
Taxable at $1.50 on improvements	2,069,050	
		8,533,303
Taxable at $1 on land	3,088,042	
Taxable at $1 on improvements	996,450	
		4,084,492
		137,626,419
Total in the District of Columbia:		
Washington		119,613,603
Georgetown		5,395,021
County		12,617,795
Total real		137,626,419
Personal property:		
Washington	$10,281,393	
Georgetown	607,603	
County	134,171	
		11,023,167
Total taxable real and personal		148,649,586

RATE OF TAX.

The rate of tax is now fixed by law at $1.50 per $100 for all taxable personal property and for all taxable real property, except that used for agricultural purposes, which is $1 per $100.

COLLECTION OF REVENUE.

The collector of taxes reports the collection, and deposited by him in the Treasury of the United States, of revenues received at his office during the year as follows:

Tax on real property	$1,774,039.87
Tax on personal property	169,944.28
Penalties, etc., on arrearage of tax	85,144.22
Miscellaneous items including $16,705.67 trust bonds	268,610.18
Water fund	246,454.13
	2,544,192.68

The total uncollected general taxes since 1872 are $664,331.29, $180,181.18 of which were arrears from the levy for the fiscal year ended June 30, 1889.

A large portion of this apparent arrearage consists of assessments against property whose taxability is a matter of doubt or dispute; which, because of lack of available clerical force, has not been eliminated from the tax accounts. Much of the remainder of this arrearage is due to the deliberate omission of the property owners to pay it, because of their reliance upon the disfavor with which the courts are reputed to look upon title derived through tax sales for overdue taxes. Several attempts have been made by the District authorities to secure the enactment of a statute that would enable the District to give an indefeasible title under such sales. The most effectual of these provisions is that contained in the fifth section of the act of March 3, 1877 (v. 9, U. S. Stat. L., p. 397), which requires the Commissioners to bid off, in the name of the District of Columbia, all property where the highest bid at the annual tax sales is not sufficient to meet the taxes, penalty, and costs thereon, and to apply, in the name and behalf of the District of Columbia, to the supreme court of the District, sitting in equity, for the purpose of enforcing the lien so acquired. But the Commissioners are advised by their attorney that, as this would be a proceeding *in personam*, the difficulties attendant upon efficient prosecution of most cases of that nature would be practically insurmountable.

It seems to be conceded that the most advisable course in these cases is by proceedings *in rem*. The former assistant attorney for the District, Mr. Henry E. Davis, has given the subject much study, and prepared a draft of a bill to effect that object, which he has submitted to the Commissioners and which they intend to transmit to Congress at the current session.

ARREARS OF PERSONAL TAX.

The amount of arrears of personal tax on June 30, 1889, was $286,305.51, $20,057.17 of which was arrears for the fiscal year ending that date.

During the year, $14,071.37 of personal tax due and unpaid in preceding years was collected, mainly through instrumentalities provided for out of the appropriation of $2,000 for the collection of overdue personal taxes.

SPECIAL ASSESSMENTS.

The overdue special assessments for work done under contracts and extensions of contracts of the late board of public works June 30, 1889, amounted to $271,583.21. Two hundred and nine thousand six hundred and two dollars and seventy-two cents of this amount, bearing interest at the rate of 10 per cent. per annum, on an average, since 1876, represented the assets pledged for the redemption of the outstanding 8 per cent. certificates of indebtedness commonly called "greenbacks," which amounted on the date aforesaid to $66,950, on which there was then an accrued interest of about $70,000.

The remainder of these special assessments, viz, $61,980.49, also bearing interest at an average rate of 10 per cent. since 1872, are held by private parties.

OLD CORPORATION ASSESSMENTS.

The amount collected on account of special assessments levied by the late corporation of Washington was $4,278.67.

COMPULSORY PERMIT ASSESSMENTS.

Under the act of Congress approved July 9, 1886, and subsequent germane enactments of that body, $37,013.38 of assessments have been made under the system of making special improvements, the cost of which is borne in certain portions, varying from one-third to one-half by the property owners and the balance by the District.

This amount has been reduced by cancellation of taxes on exempt property and by collections to $12,827.41. Seventeen thousand six hundred and forty-eight dollars and five cents of these collections were made during the fiscal year ended June 30, 1889.

DRAWBACK CERTIFICATES.

The amount of drawback certificates prior to June 30, 1889, due by reversion under acts of June 19, 1878, and June 27, 1879, was $954,938.37; under act of February 12, 1889, $45,447.23; total, $1,000,385.60, of which $977,754.45 were issued. Of those issued only $15,857.09 are outstanding, the remainder having been received in payment of taxes, and canceled.

PUBLIC SCHOOLS.

The public schools, a detailed report of which is herewith joined, share a large part of public interest and attention. The Commissioners have given much thought and time to this important interest. By the liberality of Congress, most of the 37,000 children who present themselves for instruction are provided with separate seats, clean, well-ventilated, well-furnished, commodious school rooms. No child need go more than a few squares to reach a place of instruction. A course of instruction and discipline, approved by experience and most advanced thought, is offered alike to all without distinction of color or condition.

In the day schools there were taught during the past year 35,764 children, 22,760 of whom were white and 13,004 were colored. In the night schools 2,200 persons were taught, of whom 1,192 were white and 1,008 colored. Thirty-seven thousand nine hundred and sixty four persons were, therefore, enrolled in all kinds of schools. The Commissioners believe the work was well done. In our visits to the schools we have seen unmistakable evidence of system, cultivation, and refinement. The quiet, cheerful industry everywhere found was guaranty of contentment and success.

The Commissioners believe that no other department of our District government should be guarded more carefully or provided for more liberally. We hope that Congress will continue the same wise, intelligent, and liberal policy that has characterized its acts during the past ten years.

FIRE DEPARTMENT.

The fire department consists of 1 chief engineer, 2 assistant chief engineers, 1 marshal, 10 foremen, 8 engineers, 8 firemen, 68 privates, 11 hostlers, 2 tillermen, 1 veterinary surgeon, 6 watchmen, and 1 clerk. The apparatus of the department consists of 10 steam fire-engines, 11 hose carriages, and 3 hook-and-ladder trucks. Fifty-one horses are in use in the department. Provision was made in District appropriation act for 1890 for a chemical engine, which has not yet been purchased.

The department has 21,600 feet of hose, 11,300 feet of which is in good condition, 7,450 fairly usable, and 2,850 in bad condition. The companies are located as follows:

No. 1 engine company, K street, between Sixteenth and Seventeenth streets, northwest.

No. 2 engine company, D street, between Twelfth and Thirteenth streets, northwest.

No. 3 engine company, Delaware avenue and C street, northeast.

No. 4 engine company, Virginia avenue, between Four-and-a-half and Sixth streets, southwest.

No. 5 engine company, W street, between Thirty-second and Potomac, northwest.

No. 6 engine company, Massachusetts avenue, between Fourth and Sixth streets, northwest.

No. 7 engine company, R street, between Ninth and Tenth streets, northwest.

No. 8 engine company, North Carolina avenue, between Sixth and Seventh streets, southeast.

A truck company, North Capitol street, between B and C streets, northeast.

B truck company, New Hampshire avenue and M streets, northwest.

Each engine company consists of 1 foreman, 1 engineer, 1 fireman, 6 privates, and 1 hostler. Each truck company consists of 1 foreman, 1 tillerman, 8 privates, and 1 hostler.

The department responded to 255 fire alarms during the year. These fires caused an estimated loss of $140,953, $79,734 of which was covered by insurance. The work of this department has compared favorably with its excellent record of preceding years.

FIREMEN'S RELIEF FUND.

The relief fund of the fire department is derived wholly from the compulsory monthly contribution of $1 by each member of the department, as required by law. (U. S. Stat. L., vol. 23, p. 317.) This source provides a very meager fund, which is liable at any time to be inadequate to the requirements it is designed to meet. The result of such a failure would have a very depressing effect upon the morale of the department, and, consequently impair its efficiency. The fireman's services would be more zealously rendered if the firemen were assured, by the existence of an ample pension fund, that those dependent on them would be duly provided for in case of their disability from injury in the line of duty. Hence sound public policy requires that such an assurance be given. This could be effected—as the predecessors of the present Commissioners recommended—by directing by general law that the amount now allowed by law, or such other as might be deemed suitable, be paid, as occasion arises, from any funds in the Treasury to the credit of the District and the United States in equal parts.

POLICE.

The effective force of the police department on June 30, 1889, consisted of 376 men, as follows:

One major, 1 captain, 2 inspectors, 9 lieutenants, 28 sergeants, 185 privates, class 1, and 150, class 2. Of this force, 6 sergeants, 40 privates of class 1 and 10 of class 2 were added during the year. It is desirable

that the force should be still further increased; and, with this object in view, the Commissioners included in their estimates for the fiscal year to end June 30, 1891, estimates for 5 additional sergeants and 27 more privates, each, in classes 1 and 2.

The records and property of the department are cared for by 3 clerks, 19 station keepers, 8 laborers, 2 messengers, 3 ambulance drivers, and 7 patrol-wagon drivers. Three police matrons, for the examination and care of female prisoners under detention at station-houses, are also employed in the department.

This department shares with the fire department the services of four police surgeons, whose duty it is to furnish medicine and surgical treatment to officers of said departments when necessary.

The major of police reports that the department is still seriously hampered by the requirement in section 354 of the Revised Statutes of the United States, relating to the District of Columbia, that "no person shall be appointed as policeman or watchman who has not served in the Army or Navy of the United States and received an honorable discharge."

This law was passed to furnish honorable employment to those who had rendered valuable service to the country in the Army or Navy. It has become a matter of serious difficulty to obtain competent policemen under this law. Its repeal has been recommended by every board of Commissioners since 1878, and is renewed by the present board.

TELEGRAPH AND TELEPHONE SERVICE.

The telegraph and telephone service of the District government comprehends the police telephone and telegraph systems, including the supervision of the electrical plant used in connection with the police-signal and the fire-alarm systems and the public schools and District offices.

With respect to the matter of maintaining the lines, the superintendent of the service recommends that the prohibition against erecting overhead wires be relaxed or that sufficient money be appropriated to provide for laying all District wires under ground. The Commissioners recommend the latter course.

ATTORNEY.

Among the important matters referred to by the attorney in his annual report are the decisions of the Supreme Court of the United States in the cases of the Metropolitan Railway Company *vs.* The District of Columbia and Brown *vs.* The District of Columbia.

In the former case, the District had obtained judgment in the court below for more than $147,000 on a suit to recover from the railroad company the amount expended by the District in paving the spaces between the company's rails and tracks. The company carried it up on a writ of error and obtained a reversal of judgment, principally that the District had lost its rights by the operation of the statute of limitations.

This court also, on the ground that the amount involved excluded its jurisdiction, dismissed the District's appeal in the Brewer case, in equity, in which the court below decided that a tax deed made in pursuance of a sale for the unpaid taxes of a certain year passed the property sold to the purchasers discharged of all liens for the taxes remaining due and unpaid at the time of the sale.

The court also dismissed, for the same reason, writs of error in cases of Gannon and Emmerson, which were actions to recover for personal injuries sustained from defective highways. The ground of dismissal was that the accrued interest could not be considered in determining questions of jurisdiction.

Fifty-one cases were finally disposed of in the supreme court of the District and 158 new cases instituted there, 91 of which were for the commitment of lunatics. Nine thousand six hundred and sixty-five cases were tried in the police court, resulting in 8,609 convictions and the imposition of $45,199.98 fines.

Besides the cases tried before the courts was the case of Samuel Strong *vs.* The District of Columbia. The amount originally claimed was more than $400,000. After a long contention in the court and two attempts to settle by mutual reference to arbitrators, Congress by joint resolution, July 10, 1888, referred it to three referees, who made an award against the District of $28,257.38, with interest from November 10, 1874.

The attorney renews his recommendation for the enactment of a law for the summary commitment of insane persons pending preliminary judicial proceedings of inquiry as to their sanity. He also recommends the passage of a law providing for the summary condemnation of alleys and rights of way for sewers, which can now only be obtained upon petition of private owners. He also recommends that the laws of the late corporation of Washington be made applicable to the entire District of Columbia pending the preparation of a code of laws, as a partial remedy for much of the inconvenience suffered by the lack of a uniform system of local laws.

The Commissioners approve the above recommendations.

INSPECTOR OF BUILDINGS.

The inspector of buildings reports the issue by his office during the year of 2,415 permits for the erection and repair of buildings in the District, involving an expenditure of $6,165,480. One thousand seven hundred and sixteen of these permits were for brick dwellings and 279 for frame dwellings. The fees for the issuance of building permits by this office during the year amounted to $8,499.69. The office also issued 884 permits for the use of Potomac River water in the construction and repair of buildings, the fees for which amounted to $2,083.65. This office also prepared plans for and superintended the erection of nine public-school buildings, involving an expenditure of $314,803.74; an engine-house for Company 9, of the District fire department, costing $10,845.03, and a station-house in the ninth police precinct, costing $14,361.57. The office also supervised all the repairs and improvements made during the year to school and other municipal buildings and grounds.

CORONER.

The coroner reports that he certified to deaths which occurred under circumstances requiring his official action, as follows:

Suicides	10
Homicides	14
Infanticides	11
Accidents and negligence	72
Disease	356
Still-birth	50

MUNICIPAL MARKETS.

The receipts and expenditures for the three markets under municipal ownership and control amounted to—

RECEIPTS.

Eastern Market	$3,434.50
Western Market	6,030.00
Georgetown Market	1,262.02
	10,726.52

EXPENDITURES.

Repairs	$992.50	
Contingent expenses	187.67	
Gas	1,012.88	
Salaries	3,600.00	
		5,793.05
Net revenue from markets		4,933.47

HEALTH OFFICE.

The health office reports that the total mortality of the year was 5,152; 2,713 of these decedents were white and 2,439 colored. The death rate, calculated on a population of 250,000, was, for the former, 15.96 per 1,000, and for the latter, 30.49 per 1,000. The average death rate was 20.60 per 1,000. This shows a remarkably good sanitary condition of the District. The death rate for the white population is the lowest District annual death rate ever recorded. The disproportionally large colored death rate was not due to insalubrity of climate or sanitary neglect of the authorities, but to the fact that a large majority of the colored residents here are engaged in pursuits which require exposure to the weather and are ignorant of, and consequently inattentive to, hygienic rules.

The department has rendered its services in preventing the sale of unwholesome food, removing dead animals, garbage, and night soil, and in sweeping and cleaning 177,951,854 square yards of streets and alleys. Under its supervision 14,575 indigent patients received gratuitous medical treatment.

The health officer reports that the record of marriages is not complete, because officiating officers or clergymen in many cases neglect to notify his office. He recommends that more stringent laws be enacted to compel, by severe penalties, the prompt rendition of reports in such cases. The marriage record is one of the most valuable archives for the purposes of reference, and should be made as nearly perfect as possible.

He recommends the appropriation of $5,000 for the establishment of public baths, and submits statement relative to their use in other cities.

INSPECTOR OF PLUMBING.

The inspector of plumbing approved plans for plumbing in 1,787 new houses and inspected 583 old buildings. He recommends the passage of a law authorizing the examination and registration of plumbers and imposing penalties for omission to conform thereto. While congratulating the community upon the existing scope of supervision over the plumbing construction in new houses, he regrets that the municipal authorities are without power to appropriately deal with the defective

plumbing arrangements in houses erected before the plumbing regulations were enacted. The Commissioners hope the necessary authority will be granted.

INSPECTORS AND MEASURERS OF FIREWOOD.

There are two inspectors and measurers of wood landed and sold in the District for fuel purposes.

The inspector for the Anacostia and eastern portion of Washington reports that he inspected 6,165 cords, at 9 cents per cord.

The inspector for the Rock Creek district, including the western portion of Washington and the city of Georgetown, reports that he inspected 4,319 cords in Washington, at 9 cents per cord, and 4,000 cords in Georgetown, at 10 cents per cord.

INSPECTORS AND WEIGHERS OF FUEL.

The inspector and weigher of fuel is an officer who was appointed by the predecessors of the present Commissioners in response to a requirement of the then First Comptroller of the Treasury, under section 3711 of the Revised Statutes of the United States, which requires that all coal and wood for the public service, before delivery, shall be weighed or measured by such an officer.

The incumbent of the office reports the inspection by him of 4,147½ tons of coal and 15,212 cords of wood; for which he was paid at the rate of 20 cents per ton for coal, and 9 cents per cord for wood.

INSPECTORS OF FLOUR.

There are two inspectors of flour, who report that they respectively inspected flour manufactured in or brought into the District as follows:

153,705 barrels, at 1 cent	$1,527.05
Receipts for drawings of flour	768.52
Total receipts	2,305.57
Expenses, $80 per month	960.00
Net compensation	1,345.57
50,470 barrels, at 1 cent	504.70
Receipts for drawings of flour	312.92
Total receipts	817.62
Expenses	338.90
Net compensation	478.72

COMMISSIONERS OF FLOUR INSPECTION.

There are three commissioners of flour inspection, whose duty it is to fix the standard for grades of flour and decide disputes where the quality of flour is called into question. They report that no necessity for their services arose during the year.

SEALER OF WEIGHTS AND MEASURES.

The sealer of weights and measures reports the receipts and expenditures of his office during the fiscal year to have been $2,606.65 and $636.50, respectively.

HARBOR-MASTER.

The harbor-master renews his recommendation for better laws pertaining to the use of the harbor. His views are represented by H. R. 9630 of the last Congress. The enactment this session of a law similar to the provisions of that bill is recommended.

INSPECTORS OF LUMBER.

The inspectors of lumber report having measured 23,189,144 feet of lumber brought to the District for sale.

CLERICAL FORCE.

The Commissioners find that the clerical force is inadequate for the prompt and efficient execution of the municipal work. The amount of work required to be done by the different divisions is not uniform throughout the year, and the fullest power should be given to the Commissioners to detail clerks from one division to another as emergencies arise therefor. Six more clerks are needed; of which three should have a salary of $900 per annum, and three a salary of $1,200, each, payable monthly; and an appropriation of $6,300 is recommended for that purpose.

LIQUOR LICENSES.

The law regulating the issue of licenses for the sale of intoxicating drinks in the District of Columbia is not satisfactory. It is submitted that whatever discretion is given to the Commissioners to grant or refuse a license should be explicitly defined, and either left absolute in them under reasonable regulations, or so circumscribed as to remove all doubt of its extent. The Commissioners will prepare and submit a draught of a bill to the Committee on the District of Columbia early in this session of Congress, embodying their views on this important subject.

SUNDAY LAW.

The Commissioners recently had occasion to pass upon complaint of a citizen that the work of constructing a street railway was prosecuted on Sunday. An examination of the statutes failed to disclose any existing general law prohibiting such employment. The Commissioners believe that secular occupations should not be allowed on Sunday, and they recommend the enactment of a law in accordance with that sentiment.

WATER DEPARTMENT.

During the year a total length of 67,932 feet of cast-iron pipe was laid, varying in size from 3 to 24 inches in diameter. This is about three times the aggregate laid during the preceding year, and exceeds the number of feet laid in any year since 1872.

The Fourteenth street main, which now affords fairly satisfactory pressures to southwest Washington, was completed at an expense of $27,542.78. Under existing law this entire sum is chargeable against the water revenues of the current year, which will cause great inconvenience by preventing the laying of service mains where they have been applied for. It is very desirable that the law should be modified so that half this cost may be charged against the water revenues of 1891.

The fixed charges for interest and sinking fund now aggregate somewhat more than one-half the annual income of the water fund from all sources. With all these obligations the water department will be able to do little more than maintain and keep in repair the existing system of distribution. Legislation is urgently needed to relieve the water department of these fixed charges, so that it may undertake necessary improvements and extensions.

The Commissioners renew the recommendation submitted in their last annual report that they be empowered by legislation to lay mains and order the assessment of the water-main tax as in their discretion may best meet the needs of the public service.

The operations of the water department during the year are given in detail in the report of Capt. James L. Lusk, Corps of Engineers, which is appended hereto.

SEWERAGE.

The modern part of the sewer system successfully endured the severe trials of the heavy spring rain-falls. The unusual amount of material washed into the large sewers and the James Creek Canal produced flooding during the summer. The accumulations were removed so far as possible as soon as funds became available.

About 20,000 feet of old pipe sewers should be replaced as soon as funds become available. This work is even more necessary than the extension of the sewer system, since many obstructed sewers are in densely populated districts where the drainage is defective.

The appropriation for the preparation of plans for sewage disposal, made in the appropriation act of 1889, could not be wholly expended during the last fiscal year for reasons fully stated in Captain Lusk's report. About one-half remained unexpended, and, under the decision of the accounting officers, had to be covered into the Treasury. The plans and estimates are therefore delayed and their scope much limited. Fortunately a board of eminent civil and sanitary engineers, appointed by the President, is now engaged in studying the whole sewerage question, and the disposal of sewage will be necessarily included in its investigation.

STREET LIGHTING

The number of gas lamps in service at the end of the fiscal year was 4,941. The number of new lamps lighted during the year was 433. The temporary use of oil lamps in localities where gas mains have not yet been laid has been continued with satisfactory results. The total number employed was 174. The municipal lighting east of Rock Creek has been maintained in a highly satisfactory manner.

The municipal electric arc-lights are now all operated by underground conductors in accordance with law. The number now employed is 181. It should be increased to 203, for reasons stated in Captain Lusk's report.

INSPECTOR OF GAS AND METERS.

This officer has performed his duties efficiently during the year. The details of his work will be found in his report, which is appended hereto.

SURVEY OF THE DISTRICT.

The rainy weather of the spring and early summer so greatly retarded the outdoor work that it will be impossible to complete this survey during the current fiscal year. The Superintendent of the Coast

and Geodetic Survey, under whose direction the work is executed, estimates that $10,000 will complete the original project and make a good beginning on that portion of the old District which was receded to Virginia.

INSPECTOR OF ASPHALT AND CEMENTS.

The report of this officer contains valuable and interesting details of tests and analyses of materials of construction, and water from wells, springs, reservoirs, and mains. A systematic course of tests of cements has been instituted, which will insure greater regularity in the quality of these materials.

STREET PAVEMENTS.

During the past year the pavements laid have consisted of granite block, asphalt on bituminous base, asphalt on hydraulic base, coal-tar distillate, and asphalt-block. Only a few squares of the coal-tar distillate have been laid, as it is not considered as satisfactory as the asphalt pavement. The experiment of laying a sheet pavement on old rubble or cobble as a base has been tried with apparent success. If it proves satisfactory after extended trial it will result in a large saving to the District.

The nature, distribution, and cost of the various street improvements made during the year, and the schedule of streets to be improved during the current year selected by the former Board of Commissioners, are given in detail in Captain Symons's report.

A change has also been made in the method of grading and regulating streets which will also result in a great saving. Heretofore this work has consisted in the construction of a sidewalk, curb, gutter, and gravel roadway. The curb is now temporarily omitted, and for the gravel roadway a macadam roadway is substituted of such grade and form as to make it a proper base for a future asphalt surface. The expense of construction is not increased, and a better temporary roadway is obtained while the cost of the permanent pavement is much diminished.

The schedule of streets recommended for improvement has been prepared with great care and after thorough consideration. Upon the recommendation of the engineer department the general schedule has been abolished. The total amount recommended for appropriation is $854,450. This amount has been divided among the different sections of the District after due consideration of the taxable valuations, areas, population, and areas of streets not finally improved. In selecting streets for improvement those streets have been given the preference which were in the schedule of last year, but which were not improved because the appropriation was insufficient. The schedule finally adopted is appended to this report.

PERMIT SYSTEM.

Under the appropriation for permit work some of the most valuable improvements are executed. Alleys are paved, sidewalks are constructed, repaired, and replaced, and minor sewers are laid to the great advantage both of residents and the District. The Commissioners earnestly recommend the appropriation of the full amount asked for. A much larger sum could be expended with great benefit.

A considerable portion of the permit fund has been reserved for the construction of improved sidewalks. These sidewalks are composed

of asphalt tiles and blocks, artificial-stone blocks, and finally of sheet asphalt, formed mainly from old asphalt removed from the surface of Pennsylvania avenue and other places. If the sidewalk last mentioned proves satisfactory the District will obtain admirable footways at a low cost.

EXTENSION OF STREETS AND AVENUES.

The attention of Congress is earnestly invited to the necessity for immediate legislation to rectify irregular and ill-considered subdivisions in the regions north of the city of Washington. The act of August 27, 1888, which requires future subdivisions of property beyond the city limits to conform to the general plan of the city of Washington has been of great benefit and will conduce to a proper extension of the city. The harm already done by the recording of improper subdivisions can only be repaired by new legislation, and it is of the highest importance that action should not be deferred, since the necessary rectifications are becoming more and more costly every year.

The act above referred to authorizes and directs the Commissioners to make and publish general orders to regulate the platting and sub division of lands and grounds. Such orders were published on the 10th, 11th, and 12th of December, 1888, in the Evening Star and Washington Post newspapers, and will be found appended to this report.

BRIDGES.

The heavy floods of the past year have been very severe in their effects upon the bridges of the District, several of which were carried away and many others so injured as to require extensive repairs. Full details are given in Captain Symons's report. The Chain Bridge was the most seriously injured, and the necessary repairs have cost nearly $5,000.

After the flood had subsided, a displacement was discovered in one of the trusses of the Free Bridge, at the second pier from the Virginia side. Upon careful investigation by an expert diver it was found that the first pier from the Virginia shore had settled, a considerable portion of the lower masonry of the pier having been carried away. The cavity was filled with quick-setting Portland cement concrete, the work being done by divers under the direct supervision of Mr. C. B. Hunt, civil engineer. Finally 952 tons of riprap were placed about the pier. It has stopped settling, and is believed to be as good as ever.

The Woodley Lane Bridge over Rock Creek, for which $35,000 was appropriated by Congress last year, has been completed under a very advantageous contract with the Groton Bridge Company.

STEAM RAILROADS.

The Commissioners again invite attention to the unsettled condition of affairs with respect to steam-railroads. The rapid growth of the city renders increased facilities necessary for the transaction of railway business, and the destruction of the Chesapeake and Ohio Canal has thrown a heavy additional burden upon the railroads. It is urged that some general plan should be adopted at an early day to regulate the granting of further necessary extensions and privileges and to protect the interests of the people.

STREET RAILWAYS.

A provision in the last appropriation act authorized the street railway companies to substitute for horses other motive power, under certain conditions, and required them to introduce modern grooved rails within a fixed period. This has had an excellent effect. The Washington and Georgetown Railroad Company has now under construction a first-class cable road on Seventh street from the Arsenal to the Boundary. The company has also replaced the old center bearing stringer rails with grooved girder rails on Pennsylvania avenue from First to Seventeenth streets, and Fifteenth street from Pennsylvania avenue to New York avenue. On April 19, 1889, the Commissioners adopted an order prohibiting the laying of cobble-stone pavements between rails or tracks on any street paved or ordered to be paved, and required Belgian blocks, or, in lieu thereof, concrete pavement. This is in accordance with the best modern practice.

The electric street-railway of the Eckington and Soldiers' Home Company has proved a very decided success. Up to the present time no satisfactory underground electric-railway system has been introduced, and the Commissioners are of the opinion that of all the existing systems the center-pole system, such as is used by this company, which removes the conductors from the vicinity of trees and footways, is safest and most satisfactory. Wherever overhead wires are employed this arrangement should be insisted upon, both for safety and appearance, except when the carriageway has not sufficient width.

The Tenallytown Railway, which is now under construction, will be operated by electricity upon the same system as the Eckington road.

THE PARKING COMMISSION.

The removal of wooden tree-boxes, and their replacement by wire-netting where needed, have been continued. The business of caring for the trees and planting new ones has been conducted by the commission with wisdom and ability. The work of the commission is given in detail in its report which is appended hereto.

SURVEYOR'S OFFICE.

This office is supported by fees, which in the aggregate are not sufficient to pay expenses and properly preserve the records. The latter, which are of great value, are old and becoming much worn from constant use by title-searchers. They should be copied, indexed, and carefully preserved.

The Commissioners believe it to be greatly in the public interest that the surveyor should be made a salaried officer of the District, the expenses of his office to be provided for by regular appropriation, and the fees collected to be turned into the general revenues. The office could thus be properly provided for and maintained as an office of record. As the existing system is established by law, new legislation is necessary for the proposed changes.

BOARD OF EXAMINERS OF STEAM ENGINEERS.

This board has performed its duties up to the present time without compensation. The Commissioners have renewed the estimate submitted last year to compensate the board, to record its transactions, and to provide necessary stationery.

The act of February 28, 1887, under which this board performs its duties, should be so amended as to provide for its enforcement when its requirements are not complied with. The labors of the board have been of great value, but with an amended law much much more satisfactory results can be obtained.

ROCK CREEK PARK.

The project for the establishment of a public park in the valley of Rock Creek has been brought to the attention of Congress many times during the past twenty years. The location referred to is most admirably adapted to this purpose, and the Commissioners recommend that provision be made without delay to secure the necessary ground before the difficulty and expense thereof is greatly increased by the subdivision of the region. A commencement of this much-desired work has been already authorized by a provision in the appropriation act of 1889, establishing a zoological park in the country along Rock Creek, but the Commissioners are of the opinion that the interests of the public require that this project should be much extended. They earnestly recommend the passage of the bill introduced in the House of Representatives by Mr. Hemphill, January 14, 1889, (Fiftieth Congress, 2d session, H. R., 12136), or some similar legislation.

ROCK CREEK TUNNEL.

The project for the construction of a tunnel in the valley of Rock Creek, between Lyons' Mill and Pennsylvania avenue, has been repeatedly recommended to Congress by the District Government. The Commissioners renew this recommendation, as they consider the work proposed of great importance and value to the cities of Washington and Georgetown.

UNDERGROUND WIRES.

During the year preceding November 1, 1889, the United States Electric Lighting Company placed underground fourteen miles of arc-light conductor. During the same period, the Chesapeake and Potomac Telephone Company increased its mileage of underground conductor by 19.2 miles; while the Postal Telegraph Cable Company constructed a new underground conduit from Fourteenth and T streets, northwest, along T street to Sixth and Boundary streets, and renewed its conduit along Fourteenth street, west, with its connections.

It is suggested that the telegraph companies be given one year to place all their wires underground, and that after the lapse of this time they be required to pay a license fee of $25 per annum for each pole maintained within the city limits.

Very respectfully,

J. W. DOUGLASS,
L. G. HINE,
C. W. RAYMOND,
Commissioners District of Columbia.

A.

REPORT OF THE AUDITOR.

OFFICE OF THE AUDITOR DISTRICT OF COLUMBIA,
Washington, November 29, 1889.

GENTLEMEN: I have the honor to submit herewith a report of the receipts and expenditures of the government of the District of Columbia (statements marked respectively A, B, C,) for the fiscal year ended June 30, 1889.

A summary of these statements shows:

RECEIPTS.

Balance on hand July 1, 1888	$1,356,093.16
Received during the year	5,130,485.32
Repaid to appropriations	23,890.39
Total receipts	6,510,468.87

EXPENDITURES.

Total expenditures	5,147,686.81
Balance on hand July 1, 1889	1,362,782.06

The above balance is divisible as follows:

General expenses District of Columbia	$1,328,263.44
Contractors' guaranty fund	5,476.17
Policemen's relief fund	10,174.19
Firemen's relief fund	2,480.84
Washington special tax fund	9,538.89
Redemption of tax-lien certificates	4,344.29
Washington redemption fund	898.20
Redemption of assessment certificates	292.00
Redemption Pennsylvania avenue certificates, act July 8, 1870	117.05
Redemption Pennsylvania avenue certificates, act July 19, 1876	176.03
Filling grounds south of the Capitol, under various acts	191.07
Sales of property in Washington and Georgetown, act March 3, 1881	449.12
General expenses of the District, act March 3, 1875	292.31
Surplus fund	87.50
Fire department, act June 22, 1874	.49
Bureau of Engraving and Printing and Quartermaster's corral, sewers, act March 3, 1887	.47
Total as above	1,362,782.06

During the year 7,652 accounts were audited and 37,055 checks drawn, being an excess of 1,439 audits and 6,472 checks over those of the previous year, and an increase of 20 per cent. in the business of the office.

The audit of "accounts of employés in charge of permit funds," ordered by the Commissioners June 13, 1888, was suspended at the date of the last annual report, for the reason that one of the books required

could not be found. Since then, however, the information needed has been obtained from collateral records, and the examination, except as to one employé, completed. It gives me pleasure to state that no evidence of the misuse of public moneys has been adduced, every specific accusation having been investigated and disproved even to the satisfaction of those by whom the charges were preferred.

The system of paying laborers and other per diem employés in cash, instead of by checks, as heretofore, has been adopted with gratifying results.

The clerks of the arrears division have been frequently detailed for duty in other branches of the District service, one of them being detached for seven months out of the twelve. While the lack of clerical force in offices with which the public come in daily contact has seemed to render these temporary assignments unavoidable, their necessity is none the less a matter of regret, as the work which has been so seriously hindered thereby is hardly second in importance to any other connected with the administration of District affairs.

I beg to express my appreciation of the services of my official associates, who have faithfully met every demand made upon them.

Very respectfully,

J. T. PETTY,
Auditor District of Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

A.—*Statement of receipts of the District of Columbia from July* 1, 1888, *to June* 30, 1889.

On what account received.	Detail.	Total.	Aggregate.
GENERAL TAXES AND LICENSES.			
General taxes, including penalties	$2,009,164.56		
Licenses	157,579.94		
		$2,166,744.50	
MARKETS.			
Eastern market, rents	3,428.00		
Western market, rents	6,032.50		
Georgetown market, rents	1,203.84		
Washington market, franchise rental	7,500.00		
		18,164.34	
RENT OF DISTRICT PROPERTY.			
Rent of wharves, street termini, and buildings	2,056.67		
Rent of fish wharves and stalls	459.08		
		2,515.75	
FINES.			
Fines, police court, United States cases	9,755.89		
Fines, police court, District of Columbia cases	24,649.96		
Fines, criminal court	1,157.09		
		35,562.94	
MISCELLANEOUS.			
Fees for tax-certificates	2,534.00		
Permit fees for sewers and gas	4,081.00		
Building permits	8,499.63		
Dog-tax	6,975.10		
Pound fees	503.00		
Material furnished	37.58		
Sale of old material	719.79		
Labor and sale of products, Reform School	1,470.22		
Fees for inspection of gas and meters	392.00		
Surplus from sale of contractors' guaranty bonds	1,792.41		
Engineers' licenses	2,116.85		
Sale of horse of Washington Aqueduct	9.00		
Chesapeake and Potomac Telephone Company, repairs to streets	2.80		
J. Dugan, damage to street-lamp	2.37		

A.—*Statement of receipts of the District of Columbia from July 1, 1888, etc.*—Continued.

On what account received.	Detail.	Total.	Aggregate.
MISCELLANEOUS.			
Use of steam-roller	$24.00		
Judgment in case of William Barnes *vs.* District of Columbia, paid by District of Columbia April 29, 1876, recovered with interest and costs from Baltimore and Potomac Railroad Company	7,637.75		
Advertising	4,408.32	$41,205.82	
Total taxes and revenues for 1889			$2,264,193.35
SPECIAL AND TRUST FUNDS.			
Water taxes and rents	246,454.13		
Washington special tax fund	13,078.20		
Washington redemption fund	3,039.27		
Redemption of tax-lien certificates	588.20		
Redemption of assessment certificates	740.72		
Guarantee fund (act June 11, 1878)	46,352.55		
Policemen's relief fund (act February 25, 1885)	7,974.49		
Firemen's relief fund (act February 25, 1885)	1,390.57	319,618.13	
Total special and trust funds			319,618.13
UNITED STATES APPROPRIATIONS.			
Act July 18, 1888, general expenses of District of Columbia 1889	2,404,026.16		
Act May 14, 1888, bridge Eastern Branch Potomac River	30,000.00		
Act June 9, 1888, bridge Woodley Lane Road	17,500.00		
Act October 2, 1888, Columbia Hospital, D. C	5,650.00		
Act February 1, 1888, deficiencies	5,511.84		
Act March 30, 1888, deficiencies	250.00		
Act October 9, 1888, deficiencies	28,059.54		
Act February 13, 1889, to maintain public order	4,250.00		
Act March 2, 1889, deficiencies	5,926.30		
Act March 2, 1889, general expenses of District of Columbia, 1890	45,500.00	2,546,673.84	
Total United States appropriations			2,546,673.84
Grand total of receipts			5,130,485.32

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889.*

Appropriations.	Detail.	Detail.	Total.	Aggregate.
IMPROVEMENTS OF STREETS, ROADS, ETC.				
General schedule, 1889		$126,633.61		
Georgetown schedule, 1889	$33,024.13			
Georgetown schedule, 1888	6.58			
Total		33,030.71		
Northwest schedule, 1889	179,094.17			
Northwest schedule, 1888	23.19			
Total		179,117.36		
Southeast schedule, 1889	45,663.24			
Southeast schedule, 1888	994.80			
Total		46,658.04		
Southwest schedule, 1889	38,358.73			
Southwest schedule 1888	3.42			
Total		38,362.15		
Northeast schedule, 1889	110,674.96			
Northeast schedule, 1888	144.17			
Total		110,819.13		
Repairs to concrete pavements, 1889	88,768.88			
Repairs to concrete pavements, 1888	4,388.61			
Total		93,157.49		

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
IMPROVEMENT OF STREETS, ROADS, ETC.—c't'd.				
Replacement of wood pavements, 1889		$2,982.43		
Filling streets below grade, 1888		128.74		
Work on sundry avenues and streets, and replacement of pavements, 1887		341.47		
Total for improvements of streets			$631,231.13	
ROADS AND SUBURBAN STREETS.				
To grade and regulate Howard avenue, 1889		7,617.71		
Grade Jefferson, Jackson, and Washington streets, 1889		3,752.52		
Grade and macadamize Harrison street and Good Hope road, 1889		11,356.35		
Pave Nichols avenue, 1889		12,321.54		
Work on Fourth and First streets extended, and Michigan avenue, 1889		14,962.45		
Grade Thirteenth street extended, 1889		994.98		
Grade and pave Fourteenth, Stoughton, Chapin, and Pomeroy streets, 1889		19,001.34		
Construction of county roads and suburban streets, 1888		386.01		
Total for improvements of roads, etc.			70,392.90	
Permit work, 1889		109,757.59		
Permit work, 1888		2,917.02		
Total for permit work			112,674.61	
Surveys of the District with reference to the future extension of streets and avenues, 1889			9,137.87	
Grading streets, alleys, and roads, 1889			7,297.22	
Condemnation of streets, alleys, and roads, 1889			8,629.25	
Aggregate				$839,362.98
CARE OF STREETS, ALLEYS, AND ROADS.				
Sweeping, cleaning, and sprinkling streets and alleys, 1889		79,981.36		
Sweeping, cleaning, and sprinkling streets and alleys, 1888		3,871.63		
Total			83,852.99	
Current repairs to streets, avenues, and alleys, 1889		34,668.81		
Current repairs to streets, avenues, and alleys, 1888		1,785.07		
Total			36,453.88	
Current repairs to county roads and suburban streets, 1889		44,331.13		
Current repairs to county roads and suburban streets, 1888		285.92		
Current repairs to county roads and suburban streets, 1884		96.00		
Total			44,713.05	
Parking commission, 1889		17,936.73		
Parking commission, 1888		889.45		
Total			18,826.18	
Lighting street lamps with gas, 1889		95,286.76		
Lighting street lamps with gas, 1888		14,075.12		
Lighting street lamps with gas, 1885		2,095.64		
Total			111,457.52	
Electric lighting, 1889			27,005.75	
Public pumps, 1889		3,881.83		
Public pumps, 1888		182.79		
Public pumps, 1887		60.00		
Total			4,124.62	
Hay scales, 1889			28.00	
Harbor and river front, 1889		2,560.87		
Harbor and river front, 1888		16.00		
Total			2,576.87	
Aggregate for care of streets, etc.				329,038.86

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
BRIDGES.				
Ordinary care of bridges, 1889		$2,404.27		
Ordinary care of bridges, 1888		186.93		
Total			$2,591.20	
Construction and repairs to bridges, 1889		13,146.74		
Construction and repairs to bridges, 1888		4,273.92		
Total			17,420.66	
Bridges across Rock Creek at Woodley Lane			29,427.35	
Aggregate for bridges				$49,439.21
SEWERS.				
Cleaning and repairing sewers and basins, 1889		29,846.11		
Cleaning and repairing sewers and basins, 1888		4,623.70		
Cleaning tidal sewers, 1886		1.10		
Total			33,870.91	
Replacing obstructed sewers, 1889		8,906.91		
Replacing obstructed sewers, 1888		1,029.22		
Total			9,936.13	
Main and pipe sewers, 1889		51,006.68		
Main and pipe sewers, 1888		512.54		
Total			51,519.22	
Suburban sewers, 1889		30,343.60		
Suburban sewers, 1888		6,152.73		
Total			36,496.33	
Preparation of plans for sewage disposal, 1889			1,974.03	
Aggregate for sewers				133,796.62
SALARIES AND CONTINGENT EXPENSES OFFICES.				
Executive office:				
Salaries, 1889		39,748.36		
Contingent expenses, 1889	$2,595.02			
Contingent expenses, 1888	385.77			
Contingent expenses, 1887	704.12			
Total		3,684.91		
Rent of property yards, 1889		300.00		
Total for executive office			43,733.27	
Auditor's office:				
Salaries, 1889		16,200.00		
Contingent expenses, 1889	296.28			
Contingent expenses, 1888	7.25			
Total		303.53		
Total for auditor's office			16,503.53	
Assessor's office:				
Salaries, 1889		16,232.10		
Contingent expenses, 1889	996.73			
Contingent expenses, 1888	769.48			
Contingent expenses, 1887	222.00			
Total		1,988.21		
Expenses of assessing real property 1889		12,083.45		
Total for assessor's office			30,303.76	
Collector's office:				
Salaries, 1889		17,089.14		
Contingent expenses, 1889	2,505.90			
Contingent expenses, 1888	317.00			
Contingent expenses, 1887	12.37			
Total		2,835.27		

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
SALARIES AND CONTINGENT EXPENSES—cont'd.				
Exhibit of all outstanding taxes in arrears, 1889	$492.00			
Exhibit of all outstanding taxes in arrears 1888	70.00			
Total		$562.00		
Expenses of collections by distraint, 1889		1,654.00		
Total for collector's office			$22,140.91	
Attorney's office:				
Salaries, 1889		8,600.00		
Contingent expenses, 1889	301.13			
Contingent expenses, 1888	34.83			
Contingent expenses, 1887	30.29			
Total		366.25		
Judicial expenses, 1889	1,133.89			
Judicial expenses, 1888	60.49			
Total		1,194.38		
Rent of office, 1889		100.00		
Total for attorney's office			10,260.63	
Coroner's office:				
Salary, 1889		1,800.00		
Contingent expenses, 1889	546.23			
Contingent expenses, 1888	5.59			
Contingent expenses, 1887	5.52			
Total		557.34		
Care of morgue, 1889	215.00			
Care of morgue, 1888	.75			
Total		215.75		
Total for coroner's office			2,573.09	
Engineer's office:				
Salaries, 1889		39,918.13		
Contingent expenses, 1889	4,363.56			
Contingent expenses, 1888	642.20			
Contingent expenses, 1887	123.36			
Contingent expenses, 1886	164.17			
Total		5,293.29		
Placing in good order the laboratory and apparatus in the office of the inspector of asphalt and cement, and for general supplies, 1889		981.52		
Maintaining and keeping in good order the laboratory and apparatus in the office of the inspector of gas and meters, 1888		20.65		
Total for engineer's office			46,213.59	
Sinking-fund office:				
Salaries, 1889		2,400.00		
Contingent expenses, 1889		75.00		
Total for sinking-fund office			2,475.00	
Printing, checks, damages, fuel, ice, gas, care of horses and miscellaneous expenses of offices, 1889		6,875.00		
Printing, checks, damages, fuel, ice, gas, and miscellaneous expenses, 1888		1,597.42		
Fuel, ice, gas, and miscellaneous expenses, 1887		1,441.34		
Fuel, ice, gas, and miscellaneous expenses, 1886		326.02		
Fuel, ice, gas, and miscellaneous expenses, 1883		17.20		
Total			10,256.98	
Rent of District offices, 1889			3,600.00	
Aggregate				$188,060.76

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
HEALTH DEPARTMENT.				
Salaries, 1889			$24,037.83	
Contingent expenses, 1889		$3,788.16		
Contingent expenses, 1888		145.58		
Contingent expenses, 1887		332.51		
Contingent expenses, 1883		3.96		
Total			4,270.21	
Purchase of a horse, 1889			250.00	
Removal of garbage, 1889			15,000.00	
Aggregate				$43,558.04
MARKETS.				
Salaries, 1889			3,586.20	
Contingent expenses, 1889		169.75		
Contingent expenses, 1888		54.04		
Total			223.79	
Repairs and painting, 1889			992.85	
Aggregate				4,802.84
METROPOLITAN POLICE.				
Salaries		358,456.32		
Contingent expenses, 1889	$11,660.98			
Contingent expenses, 1888	1,069.18			
Total		12,730.16		
Repairs to station-houses, 1889	2,358.64			
Repairs to station-houses, 1888	22.75			
Total		2,381.39		
Rent of headquarters and substation at Uniontown, 1889		900.00		
Fuel, 1889		1,620.29		
Accommodations for matrons, 1889		605.91		
Police-signal and telephone system in third or fifth precinct, 1889		4,484.50		
Water, heating, and drying apparatus, 1889		390.00		
Total for police			381,568.57	
Buildings:				
Addition to first precinct station, 1889		4,500.00		
Purchase of site and erection of a new station-house, 1889		14,304.53		
Total			18,804.53	
Aggregate				400,373.10
FIRE DEPARTMENT.				
Salaries, 1889		94,632.88		
Contingent expenses, 1889	6,556.26			
Contingent expenses, 1888	1,529.09			
Contingent expenses, 1886	141.80			
Contingent expenses, 1885	310.77			
Contingent expenses, 1884	9.68			
Contingent expenses, 1882	4.80			
Total		8,552.40		
Repairs to engine houses, 1889		2,000.00		
Repairs to apparatus and new appliances, 1889	1,975.54			
Repairs to apparatus and new appliances, 1888	456.50			
Total		2,432.04		
Forage, 1889	4,261.11			
Forage, 1888	418.67			
Total		4,679.78		
Fuel, 1889	1,921.76			
Fuel, 1888	25.92			
Total		1,947.68		

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
FIRE DEPARTMENT—continued.				
Purchases of hose, 1889		$4,499.90		
Purchase of horses, 1889		3,947.50		
Purchase of new engine, 1889		4,500.00		
Purchase of hose-carriage, 1889		695.00		
Total			$127,887.18	
Buildings:				
Erection of a new engine-house, 1889			11,884.50	
Aggregate				$139,771.68
TELEGRAPH AND TELEPHONE SERVICE.				
Salaries, 1889			9,684.80	
General supplies, 1889		5,921.27		
General supplies, 1888		1,315.30		
Total			7,236.57	
Payment to the Standard Underground Cable Company, 1889			2,951.70	
Expenses investigating the telegraph and telephone underground systems, 1889			939.86	
Aggregate				20,812.93
COURTS.				
Salaries, police court, 1889			9,312.00	
Contingent expenses, 1889		819.37		
Contingent expenses, 1888		388.77		
Total			1,208.14	
Marshal's fees, 1889			1,400.00	
Witness fees, 1889			3,000.00	
Writs of lunacy, 1889			2,000.00	
Pay of referees in Court of Claims, 1885			850.00	
Aggregate				17,770.14
PUBLIC SCHOOLS.				
Support:				
Salaries of officers, teachers, and janitors, 1889	$513,105.39			
Salaries of officers, teachers, and janitors, 1888	500.00			
Total		513,605.39		
Contingent expenses, 1889	22,032.47			
Contingent expenses, 1888	1,418.43			
Contingent expenses, 1887	1,872.86			
Total		25,323.76		
Repairs to buildings and grounds, 1889	33,073.54			
Repairs to buildings and grounds, 1888	680.21			
Total		33,753.75		
Fuel, 1889	22,263.85			
Fuel, 1888	237.83			
Total		22,501.68		
Tools, materials, etc., for industrial training, 1889	7,994.92			
Industrial training, 1888	801.13			
Total		8,796.05		
Contingent expenses, night schools, 1889	45.41			
Contingent expenses, night schools, 1888	2.56			
Total		47.97		
Rent of school buildings, 1889		14,807.00		
Sanitary improvements of old buildings, 1889		958.54		
Furniture for new buildings, 1889		148.87		
Total for support of schools			619,943.01	

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
PUBLIC SCHOOLS—continued.				
Buildings:				
Purchase of sites and erection of buildings in the third, fifth, seventh, and eighth divisions, 1890		$36,718.62		
Addition to Washington High-School building, 1890		11,952.00		
Purchase of site and erection of a colored high-school, 1890		24,592.50		
Purchase of sites and erection of buildings in sixth division, 1890		2,039.24		
Purchase of sites and erection of school buildings in the first, second, third, fourth, fifth, seventh, and eighth divisions, 1889		271,772.68		
Purchase of sites and erection of buildings in the sixth division, 1889		10,441.11		
Purchase of lot adjoining the Sumner school building, 1888		975.56		
Purchase of site in the seventh or eighth division, 1888		1.50		
Building in second division, 1888		20.65		
Iron fire-escapes for school buildings, 1888		4,744.00		
Total for buildings			$363,257.86	
Aggregate for schools				$983,200.87
CHARITIES AND CORRECTIONS.				
Washington Asylum:				
Salaries, 1889		13,327.50		
Contingent expenses, 1889	$37,905.65			
Contingent expenses, 1888	2,837.47			
Total		40,743.12		
Fire-escapes, 1889		598.60		
New kitchen, 1889		2,475.00		
Introduction of gas into almshouse, 1889		297.28		
Total			57,441.50	
Transportation of paupers and prisoners, 1889		3,416.68		
Transportation of paupers and prisoners, 1888		241 77		
Total			3,658.45	
Relief of the poor, 1889		13,925.85		
Relief of the poor, 1888		587.40		
Food and lodging for indigent persons, 1889		2,195.00		
Total			16,708.25	
Hospital for the insane, 1889		79,185.00		
Hospital for the insane, 1888		18,783.00		
Total			97,968.00	
Reform School:				
Support of inmates, 1889		38,596.00		
New building, 1889	5,650.00			
Two fire-escapes, 1888	1,100.00			
Family building, 1887	8,480.70			
Total		15,230.70		
Total for Reform School			53,826.70	
Saint Ann's Infant Asylum, 1889			6,000.00	
Maintenance of church orphanage, 1889		1,500.00		
Building for church orphanage, 1889		4,000.00		
Total			5,500.00	
Industrial Home School, 1889			11,500.00	
Columbia Hospital for Women and Lying-in Asylum, 1889		15,000.00		
Building, Columbia Hospital for Women and Lying-in Asylum, 1889		10,900.00		
Total			25,900.00	

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
CHARITIES AND CORRECTIONS—continued.				
Women's Christian Association, 1889		$4,000.00		
Women's Christian Association, 1888		1,000.00		
Total			$5,000.00	
National Association for Colored Women and Children, 1889			10,000.00	
Children's Hospital, 1889			5,000.00	
Washington Hospital for Foundlings, 1889		7,000.00		
Building, Washington Hospital for Foundlings, 1889		600.00		
Total			7,600.00	
St. Rose Industrial School, 1889			5,000.00	
Association for Works of Mercy, 1889			5,000.00	
National Homeopathic Hospital Association, 1889			6,500.00	
National Temperance Home, 1889			2,500.00	
Central Dispensary and Emergency Hospital, 1889			12,250.00	
Aggregate				$337,352.90
MISCELLANEOUS.				
General advertising, 1889		7,953.64		
General advertising, 1888		2,720.04		
General advertising, 1887		2,011.02		
General advertising, 1886		89.16		
General advertising, 1883		24.67		
Total			12,798.53	
Books for register of wills office, 1889		198.50		
Assorting, briefing, and filing records of register of wills office, 1889		966.08		
Books for register of wills, printing, checks, damages, etc., 1887		361.50		
Books for register of wills, printing, checks, damages, etc., 1886		30.63		
Total			1,556.71	
Emergency fund, 1889		2,817.47		
Contingent expenses, 1888		956.57		
Total			3,774.04	
Interest and sinking fund on bonded debt, 1889			1,213,947.97	
Deficiency in sale of bonds retained from contractors			1,078.34	
To maintain public order during the inauguration, March, 1889			7,577.67	
Payment to F. H. Bates, military instructor at the High School			300.00	
Washington Aqueduct, 1889			20,007.44	
Payment of judgments—				
Act March 2, 1889		1,897.12		
Act October 19, 1888		9,790.34		
Act February 1, 1888		195.05		
Total			11,882.51	
Aggregate for miscellaneous				1,272,923.21
WATER DEPARTMENT.				
Salaries, 1889		15,032.52		
Salaries, 1888		6.00		
Total			15,038.52	
Contingent expenses, 1889		2,179.44		
Contingent expenses, 1888		127.03		
Contingent expenses, 1887		250.55		
Contingent expenses, 1886		10.00		
Total			2,567.02	
General expenses and pipe distribution, 1889		95,039.07		
General expenses and pipe distribution, 1888		5,828.18		
General expenses and pipe distribution, 1887		1,541.19		
General expenses and pipe distribution, 1883		10.00		
Total			102,418.44	

B.—*Statement of the expenditures of the government of the District of Columbia, from July 1, 1888, to June 30, 1889*—Continued.

Appropriations.	Detail.	Detail.	Total.	Aggregate.
CHARITIES AND CORRECTIONS—continued.				
Laying a 24-inch main on Fourteenth street from K street, north, to B street, south, 1889			$27,542.78	
Purchase of pump-house lot, 1889			2,275.00	
Two new pumping engines and boilers, 1888			26,825.03	
Interest and sinking fund on water-stock bonds, 1889		$44,610.00		
Interest on account for increasing the water supply, 1889		34,575.39		
Sinking fund on account for increasing the water supply, 1889		52,386.96		
Total			131,572.35	
Refunding erroneously paid water rents and taxes			1,209.69	
Aggregate for water department				$309,448.83
SPECIALS.				
Guaranty fund, act June 11, 1878			54,161.44	
Refunding erroneously paid taxes and licenses			4,773.27	
Washington special-tax fund			8,011.29	
Redemption of tax-lien certificates			389.54	
Redemption of assessment certificates			551.47	
Redemption of sewer certificate			110.00	
Washington redemption fund			3,017.35	
Policemen's relief fund			5,714.48	
Firemen's relief fund			1,245.00	
Aggregate				77,973.84
Grand aggregate of expenditures				5,147,686.81
The above expenditures may be classified as follows:				
From United States appropriations			2,380,187.07	
From revenues of the District of Columbia			2,384,960.34	
From water fund of the District of Columbia			309,448.83	
From special and trust funds			73,090.57	
Aggregate				5,147,686.81

C.—*Summary statement of the expenditures of the government of the District of Columbia for the fiscal year ending June 30, 1889, showing the appropriations and fiscal years to which the expenditures are applicable.*

Appropriations.	June 30, 1882.	June 30, 1883.	June 30, 1884.	June 30, 1885.	June 30, 1886.	June 30, 1887.	June 30, 1888.	June 30, 1889.	June 30, 1890.	Specials.	Totals.
Improvements and repairs						$341.47	$8,606.53	$641,635.24			$650,583.24
Permit work								109,757.59			109,757.59
Bridges							4,460.85	15,551.01			20,011.86
Washington Aqueduct								20,007.44			20,007.44
Washington Asylum							2,837.47	54,604.03			57,441.50
Transportation of paupers and prisoners							241.77	3,416.68			3,658.45
Relief of the poor							587.40	16,120.85			16,708.25
Hospital for the Insane							18,783.00	79,185.00			97,968.00
Reform School							1,100.00	38,596.00			36,696.00
Building, Reform School						8,480.70		5,650.00			14,130.70
Saint Ann's Infant Asylum								6,000.00			6,000.00
Maintenance of church orphanage								1,500.00			1,500.00
Building, Church Orphanage								4,000.00			4,000.00
Industrial Home School								11,500.00			11,500.00
Columbia Hospital for Women and Lying-in Asylum								15,000.00			15,000.00
Building, Columbia Hospital for Women and Lying-in Asylum								10,900.00			10,900 00
Women's Christian Association							1,000.00	4,000.00			5,000.00
National Association for Colored Women and Children								10,000.00			10,000.00
Children's Hospital								5,000.00			5,000.00
Washington Hospital for Foundlings								7,600.00			7,600.00
St. Rose Industrial School								5,000.00			5,000.00
Association for Works of Mercy								5,000.00			5,000.00
National Homeopathic Hospital Association								6,500.00			6,500.00
National Temperance Home								2,500.00			2,500.00
Central Dispensary and Emergency Hospital								12,250.00			12,250.00
Salaries and contingent expenses, offices		$17.20			$490.19	2,539.00	2,307.56	163,293.29			168,647.24
Expenses of assessing real property								12,083.45			12,083.45
Streets			$96.00	$2,095.64	1.10	60.00	33,210.18	384,317.38			419,780.30
Sewers								122,077.33			122,077.33
Metropolitan police							1,091.93	380,476.64			381,568.57
Buildings, Metropolitan police								18,804.53			18,804.53
Fire department	$4.80		9.68	310.77	141.80		2,430.18	124,989.95			127,887.18
Buildings, fire department								11,884.50			11,884.50
Telegraph and telephone service							1,315.30	19,497.63			20,812.93
Courts							449.26	14,531.37			14,980.63
Writs of lunacy								2,000.00			2,000.00
Pay of referees, Court of Claims				850.00							850.00
Public schools						1,872.86	3,640.16	614,429.99			619,943.01
Buildings and grounds, public schools							5,741.71	282,213.79	$75,302.36		363,257.86
Health department		3.96				332.51	145.58	43,075.99			43,558.04

Emergency fund							956.57	2,817.47			3,774.04
Interest and sinking fund								1,213,947.97			1,213,947.97
Miscellaneous expenses		24.67			119.79	2,372.52	4,317.46	19,593.22			26,427.66
Judgments						195.05		11,687.46			11,882.51
Bridge over Rock Creek at Woodley lane								29,427.35			29,427.35
Deficiency in sale of bonds rotained from contractors								1,078.34			1,078.34
To maintain public order								7,577.67			7,577.67
Payment to F. H. Bates, military instructor at high school								300.00			300.00
Redemption of sewer certificates								110.00			110.00
Water department		10.00			10.00	1,791.74	32,786.24	273,641.16			308,239.14
Refunding water rents, etc										$1,209.69	1,209.69
Guaranty fund, act June 11, 1878										54,161.44	54,161.44
Refunding taxes, etc										4,773.27	4,773.27
Washington special-tax fund										8,011.29	8,011.29
Redemption of tax-lien certificates										389.54	389.54
Redemption of assessment certificates										551.47	551.47
Washington redemption fund										3,017.35	3,017.35
Policemen's relief fund										5,714.48	5,714.48
Firemen's relief fund										1,245.00	1,245.00
	4.80	55.83	105.68	3,256.41	762.88	17,985.85	126,009.15	4,845,130.32	75,302.36	79,073.53	5,147,686.81

B.

ASSESSOR'S REPORT.

ASSESSOR'S OFFICE, DISTRICT OF COLUMBIA,
Washington, November 29, 1889.

GENTLEMEN: I have the honor to present the following statements from this office for the fiscal year ended June 30, 1889:

LICENSES.

	Totals.	Increase.	Decrease.
Apothecaries	$577.34		$7.35
Auctioneers	1,611.91	$161.66	
Book agents			48.39
Brokers	100.00		
Banks and bankers	436.55	91.34	
Bar-rooms	83,876.86	13,122.38	
Brewers	100.00		70.00
Bill posters	20.00		20.00
Billiard and other tables, etc	2,068.52	97.62	
Cattle brokers	483.34	15.00	
Commission merchants	2,245.02	198.33	
Dealers in ice	127.00	15.00	
Dealers in liquors (wholesale)	11,691.21	1,798.12	
Dealers in junk	1,153.36	350.01	
Dealers in old barrels	60.00		20.00
Entertainments, circuses, etc	1,970.00		160.00
Hacks, cabs, and vehicles	3,240.72	191.10	
Hotels	3,012.95	287.53	
Intelligence offices	101.70	30.85	
Insurance companies and agents	10,006.25	500.14	
Livery stables	3,430.92	433.32	
Manufacturers of illuminating gas	1,072.00		
Peddlers	1,553.78		221.84
Pawnbrokers	2,000.00		395.84
Produce dealers at large	8,591.95	1,107.27	
Produce dealers in markets	4,691.70	218.74	
Restaurants	3,779.25		279.10
Real estate agents	8,410.94	1,085.83	
Theaters	666.67	66.67	
Variety theaters	500.00		
Total	157,579.94	19,833.91	1,222.52
Less		1,222.52	
Total increase		18,611.39	

Total receipts from licenses, 1889	$157,579.94
Total receipts from licenses, 1888	138,968.55
Net increase	18,611.3

There were issued during the past year 3,551 licenses, and in addition 859 certificates to the collector of taxes for miscellaneous receipts; 820 bar-room licenses and 534 for the sale of liquor by wholesale were issued during the fiscal year; making an increase of bar-rooms 108 and an increase of wholesale licenses 110.

A comparison of the receipts of the year, while showing satisfactory

improvement, nevertheless indicates that the laws bearing upon this important source of revenue are badly in need of revision.

The daily experience of this office shows that the burdens of license taxation are very unequal, and while not excessive in amounts (with a few exceptions) they would be more cheerfully borne by our citizens could they receive increased protection under them.

The continued growth of our city is indicated in the increased receipts of the year.

Our hotel capacity is increasing. There is a greater demand for hacks, cabs, and all classes of vehicles. Livery stables are constantly being enlarged and others built.

I would again refer in this connection to the recommendation of last year. The rise in the value of real estate is turning attention to alleys and the centers of squares instead of streets for the location of livery stables, coal and wood yards, etc. New regulations should be made by which the rights of all concerned would be better secured.

The passage of the new law in reference to pawnbrokers has had the effect (with one exception) of withdrawing the receipts from that source entirely.

The number of licensed hacks, cabs, and other vehicles during the past year was 467.

The rates of fare now required by law to be posted by the drivers of licensed vehicles are so puzzling to the average patron—especially strangers—that they give up the attempt in disgust, and submit to extortion to avoid difficulty. They should be revised and classified in such a manner that a child could understand them.

I again renew the recommendation of this office reducing the license tax on produce dealers at large and in the several markets. The amount should be reduced to $15, and the law made to embrace in its scope all dealers who are not countrymen bringing their produce, etc., to market from day to day.

During the present year the suggestion of this office in its report of 1887 has been adopted. Hucksters upon the streets are now required to wear numbered badges corresponding to one upon the wagon. Its good results are already apparent.

The tax on street peddlers should be reduced to $15 from time of issue, and a severe penalty imposed for failure to secure a license. It would give increased protection to our merchants and increase the revenue. It is believed that not one-fourth of those engaged in this business pay the tax.

Complaint has been made from time to time by those who consign goods from abroad to commission merchants in this city. It is stated that they consign perishable goods and payment is avoided by the consignee on the statement that the goods perished before sale. The majority of those engaged in the commission business are reputable dealers and thoroughly responsible. The Government is not expected to redress private grievances, but as it licenses them means should be devised to protect all concerned.

The liquor traffic has been referred to in previous reports, and as that question is controlled by the Commissioners this office has no recommendations to make.

The insurance question still increases in importance in the District of Columbia. New companies are constantly applying for permission to do business here. Our present laws are crude, unsatisfactory, and very imperfect. New legislation bearing upon this important subject will, I hope, be passed at an early date.

(Statement of the assessed value of the taxable real estate of the District of Columbia on June 30, 1889.)

Washington:		
Taxable on land	$64,458,603	
Taxable on improvements	55,155,000	
		$119,613,603
Georgetown:		
Taxable on land	2,703,921	
Taxable on improvements	2,691,100	
		5,395,021
County:		
Taxable at $1.50 on land	6,464,253	
Taxable at $1.50 on improvements	2,069,050	
		8,533,303
Taxable at $1 on land	3,088,042	
Taxable at $1 on improvements	996,450	
		4,084,492
		137,626,419
Total in the District of Columbia:		
Washington		119,613,603
Georgetown		5,395,021
County		12,617,795
Total real		137,626,419
Personal property:		
Washington	10,281,393	
Georgetown	607,603	
County	134,171	
		11,023,167
Total taxable real and personal		148,649,586

The assessed value of the real estate taxable in the District of Columbia on June 30, 1889, is $137,626,419, and of personal property is $11,023,167.

AMOUNT OF TAX FOR 1889-'90.

Washington, $119,613,603, at $1.50	$1,794,204.05
Georgetown, $5,395,021 at $1.50	80,925.31
County, $8,533,303 at $1.50	127,999.55
County, $4,084,492 at $1	40,844.92
Total real-estate tax	2,043.973.83
Personal, $11,023,167, at $1.50	165,347.51
Total real and personal tax	2,209,321.34

In the foregoing statement I have departed somewhat from the custom of my predecessors in omitting to include the non-taxable property in the District of Columbia, consisting of the property of the United States, the District of Columbia, and that which has been exempted by Congress, composed of churches, colleges, schools, hospitals, etc. My reason for this omission is because the property in question does not enter into the revenues of the District; the value placed upon it does not represent its true value, as the same property in many instances has been carried on the books from year to year without regard to any additional amounts that may have been expended upon it since it was first assessed.

The following statement is compiled from the records and shows the amount of exempt property, as assessed, belonging to the District of Co-

lumbia and the various institutions, exempted by general law and special acts of Congress.

	Ground.	Improvements.	
Washington City, property of District of Columbia	$795,465	$1,527,400	$2,322,865
Georgetown, property of District of Columbia	41,531	173,300	214,831
County, property of District of Columbia	25,680	48,900	74,580
Property exempt by general law and special acts of Congress, consisting of churches, colleges, schools, etc.:			
Washington City	2,092,395	3,820,500	5,912,895
Georgetown	177,829	207,800	385,629
County	435,043	600,600	1,035,643
Total exempt			9,946,443

The amount of property exempted increases yearly and is due to the liberality of Congress and the broad construction placed upon the law providing for such exemption.

The number of tax accounts on the real-estate tax ledgers is divided as follows:

Washington	16,604
Georgetown	1,413
County, non agricultural	3,324
County, agricultural	968
	22,309

The number of houses in the District of Columbia as returned by the subassessors at the general assessment just completed is as follows:

District No. 1, county east of Eastern Branch	1,161	
District No. 2, county between Eastern Branch and Rock Creek	1,874	
District No. 3, west of Rock Creek	768	
		3,803
District No. 3, Georgetown		2,609
District No. 4, west of Nineteenth street, west	3,553	
District No. 5, between Nineteenth and Fifteenth streets, west	2,403	
District No. 6, between Fifteenth and Tenth streets, west	5,350	
District No. 7, between Tenth and Sixth streets, west	4,728	
District No. 8, between Sixth and First streets, west	6,916	
District No. 9, between First street, west, and First street, east	2,798	
District No. 10, between First and Sixth streets, east	3,384	
District No. 11, between Sixth and Eleventh streets, east	2,962	
District No. 12, between Eleventh and Boundary streets	1,516	
		33,610
Total		40,022

RECAPITULATION.

In the county	3,803
In Georgetown	2,609
In Washington	33,610
Total	40,022

The above list does not include Government buildings.

The report of the assessor for the year ended June 30, 1888, showed that the total number of taxable houses in the District of Columbia was 38,585, thus showing an increase as per the new assessment of 1,437 houses, exclusive of Government buildings.

GENERAL ASSESSMENT.

The triennial assessment of real estate, recently completed, was the third one made since the passage of the act providing for the same. The defects in the present law are so radical as to demand its repeal, and the enactment of a law more equitable.

Twelve men are selected to do the work, each assigned to a given district and required to canvass the same within a period of one hundred and fifty days.

They are subject to no instructions as to the basis on which they are to make the assessment, being bonded and required to take an oath to faithfully perform the duties of their office. The law requires them to make the assessment of the property at the true value in lawful money, which expression can be construed in many ways by an assessor, resulting in anything but uniformity in the assessment taken as a whole. When they meet as a board of equalization to hear appeals, the picture is presented of a number of men sitting in judgment on the assessment which each one has himself made, thus defeating the object of the law and the purpose of the appellant.

The number of appeals acted on by the late board was 2,134, of which number 1,081 were allowed and 1,053 were rejected.

The number of appeals allowed should be augmented because of changes made by the assessors themselves, as, for instance, where they were convinced that an assessment was too high, though no appeal was made, or where it became necessary because of an appeal allowed which involved a reduction in the adjacent property of similar character and condition.

To remedy the defects of the present law, some of which I have enumerated, I would suggest that Congress be asked to pass a law providing for a permanent board of assessors to consist of five persons, to whom a good salary should be paid in order to secure for the work the best men. Each of these assessors should be assigned a district, three for Washington, one for Georgetown, and one for the county. Given ample time within which to make an assessment, it is thought that an equitable and fair one could be thus made, and the great objection of inequality of assessments obviated. From any assessment made by this board, to which any property-owner objects, an appeal should be to a board composed of the assessor of the District and two other officials of the District detailed temporarily for such purpose. Their action should be final.

The time for making a general assessment might be increased from three to five years.

Provision should be made for an assessment based on a two-thirds cash value of the property, or on any basis which would make it fixed and certain, as contradistinguished from the present unsatisfactory method. If the adoption of any settled basis of assessment should result in the creation of a larger revenue than was necessary for the District's needs, power should be given to the Commissioners to reduce the rate of taxation at the time the tax levy is made in any year.

To these assessors might also be assigned the duty of making the assessment on personal property, which, owing to a lack of sufficient force and a disposition on the part of persons to whom blank schedules are sent not to return them, the law is not enforced as it should be.

Much complaint is made by parties, and justly, too, that the burden of this tax is not borne equitably. There are many persons who ought to pay the tax, but do not. This is owing to no dereliction on the part

of this office, for when individual cases are reported an effort is made to get the delinquents on the tax-books.

In 1877, when the law first went into effect, the assessed value of personal property in the District amounted to $15,419,873. This year it foots up a little over $11,000,000.

It can not be said that there is any less personal property now in the District than there was in 1877, and the conclusion is inevitable that the law is considered a dead letter by a great many persons.

If the law can not be enforced and all made to pay who are liable, it would seem that the proper thing to do would be to ask Congress to repeal it, or if the revenue derived from it is essential, then Congress should make a sufficient appropriation to enforce the making of the assessment and its collection.

The personal-tax law as it stands is defective in three particulars. First. A person carrying a stock of goods is required to pay tax on its marketable value, although the goods may have been purchased partly on credit. The tax should be on the amount of capital invested in the business. Second. Corporations procure a charter in some neighboring State, pay a nominal yearly sum as tax in said State, transact business here, and under the present law are exempted from District taxation, while probably occupying the same building is another company incorporated under the District's general incorporation law, paying a tax on a $200,000 capital. Third. Holders of stocks, bonds, deeds of trust, etc., are also privileged, as they are permitted to deduct from the value of said property any debts they may owe or interest which they may pay on same.

I sincerely concur in the recommendation of the collector of taxes respecting the enforcement by legal means of the collection of arrears of taxes.

Congress has at four different times passed acts enabling the owners of property on which tax was in arrears to pay the same with 6 per cent. interest. Many people availed themselves of this provision of law, and a large amount of arrears was accordingly collected.

It would seem that the best of these cases have paid up, leaving as a residue those who will never pay until forced to do so by resort to a sale of their property. They will not sell it themselves, and so year after year the same property is sold for taxes, and will continue to be so sold until something effective is done.

PLAT BOOKS FOR CITY AND COUNTY.

One of the needs of this office, and of the business portion of this community, is a new set of plat books.

The last books were compiled in 1873 by Messrs. Faehtz & Pratt, and was a purely business venture, though officially indorsed by the District government, in the certification of the surveyor of the District of Columbia, and an officer then known as the tax clerk. Since this compilation, eleven books containing new subdivisions have been added, which have to be referred to in order to gain any desired information respecting changes made since the Faehtz publication.

An atlas published by Hopkins is the latest work of that character, but it is two or three years behind date, and was not sufficiently accurate to serve as a basis for computation. It is measurably useful as a book of reference.

An appropriation by Congress of $20,000, it is thought, would do the work needed, and should be asked for, as no private firm would care to

undertake the work, because of the large sum involved and the risk of selling the work when completed.

The cost to the District of the work could be materially decreased by placing an edition of it on the market. Real estate agents, bankers, lawyers, insurance agents, and large property owners would become ready purchasers of such an invaluable publication, and the money received could be deposited in the Treasury to repay the appropriation made.

The past five years has seen a wonderful change in county real estate, many pieces of property assessed as agricultural land having been subdivided and now assessed as city lots are, by the square foot, resulting in a larger increase in the District revenue.

In 1881 a work known as the maps of the county was made by Mr. B. D. Carpenter, which at the time was useful in describing in plats the different owners of county real estate without giving the courses and distances of the land so owned.

It is found that under the present condition of county property the maps in question have become superannuated.

BOOK OF ARREARS OF TAXES.

A record containing a list, systematically arranged by squares, of all property in the District in arrears for taxes should be made, and Congress should be asked to make an adequate apppropriation for the work. The present force of the office can not undertake it owing to the pressure of current work.

The data thus collated would facilitate the getting out of certificates of unpaid taxes, 5,276 of which were issued during the last fiscal year, thus increasing the revenue of the District in the sum of $2,534.

The time required in this office to make up one of these certificates running back to 1867 is about one hour, and necessitates the handling of some twenty-one tax ledgers by the clerks. If the unpaid accounts contained in these twenty-one books could be put in one or two volumes, it will be readily seen what a saving of time and labor would ensue.

In this connection I should like to call your attention to the necessity of providing additional accommodations for the tax ledgers. Each year adds to the number already accumulated in room 5, sixteen volumes, and next year the number will be increased to eighteen.

In order to provide for these books, which are in constant use, I would recommend that the room in which they are kept be enlarged by building over the space on the rear of the lot, which, it is thought, could be done at a cost not exceeding $1,000.

In concluding my report I desire to commend the corps of clerks in my office for their faithful and energetic service.

The clerical duties of the office are arduous and are performed without murmur.

Your attention is invited to my estimates with the hope that Congress may be impressed with the justice of increasing the salaries of those who by long service are entitled to a just reward.

Very respectfully,

ROGER WILLIAMS,
Assessor District of Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

STATEMENT A.—*Value of personal property in the District of Columbia assessed for taxation from* 1877 *to June* 30, 1890; *rate,* $1.50 *per* $100.

Year.	Assessed value.	Amount tax.	Amount collected.	Year.	Assessed value.	Amount tax.	Amount collected.
1877	$15, 419, 873. 00	$231, 298 10	$171, 612. 61	1884	11, 311, 622. 00	169, 674. 33	157, 441. 55
1878	17, 239, 051. 00	258, 585. 77	154, 837. 28	1885	12, 795, 934. 00	191, 939. 01	166, 360. 48
1879	13, 336, 920. 00	200, 053. 80	163, 364. 86	1886	12, 658, 949. 00	189, 884. 24	160, 006. 92
1880	11, 421, 431. 00	171, 321. 47	115, 577. 78	1887	11, 934, 245. 00	179, 013. 68	154, 287. 74
1881	10, 895, 712. 00	163, 435. 68	205, 866. 45	1888	10, 943, 458. 00	164, 151. 87	150, 058. 37
1882	9, 666, 272. 00	144, 994. 08	137, 838. 56	1889	11, 728, 672. 00	175, 930. 08	155, 872. 91
1883	9, 028, 812. 00	135, 432. 18	142, 973. 38	1890	11, 023, 167. 00	165, 347. 51	.....

STATEMENT B.—*Value of real property in the District of Columbia as assessed for taxation from* 1871 *to* 1890, *inclusive.*

Year.	Washington.	Georgetown.	County.	Total.
1871	$66, 818, 886	$6, 213, 467	$6, 965, 101	$79, 997, 454
1872	62, 421, 331	6, 036, 434	6, 500, 000	74, 957, 765
1873	72, 880, 380	6, 366, 488	8, 623, 056	87, 869, 924
1874	80, 539, 782	6, 272, 010	9, 621, 280	96, 433, 072
1875	82, 292, 906	6, 312, 099	9, 270, 036	97, 875, 041
1876	78, 818, 934	5, 849, 317	8, 784, 433	93, 452, 684
1877	81, 246, 847	5, 953, 932	8, 728, 622	95, 929, 401
1878	83, 101, 484	6, 028, 041	8, 480, 365	97, 609, 890
1879	75, 555, 801	5, 242, 224	6, 693, 417	87, 491, 442
1880	76, 085, 940	5, 291, 313	6, 603, 103	87, 980, 356
1881	77, 256, 610	5, 282, 096	6, 414, 372	88, 953, 078
1882	78, 515, 793	5, 266, 943	6, 525, 759	90, 308, 495
1883	80, 615, 448	5, 307, 116	6, 611, 101	92, 533, 665
1884	80, 293, 418	4, 013, 888	6, 541, 368	90, 848, 674
1885	82, 825, 255	4, 074, 358	6, 602, 851	93, 502, 464
1886	85, 132, 151	4, 160, 222	6, 760, 956	96, 053, 329
1887	96, 383, 486	4, 741, 540	7, 172, 075	108, 302, 101
1888	99, 430, 297	4, 908, 345	7, 406, 186	111, 744, 830
1889	102, 886, 043	4, 987, 632	7, 611, 678	115, 485, 353
1890	119, 613, 603	5, 395, 021	12, 617, 795	137, 626, 419

C.

COLLECTOR OF TAXES.

OFFICE OF COLLECTOR OF TAXES,
DISTRICT OF COLUMBIA,
Washington, September 2, 1889.

GENTLEMEN: I have the honor to transmit herewith a report in detail of the business of this office for the fiscal year ending June 30, 1889, with such recommendations I deem necessary for the better and more efficient transaction of the business of the office, as directed in your letter.

I respectfully request that fifty copies of this report be printed for the use of this office.

Very respectfully,

E. G. DAVIS,
Collector of Taxes, District of Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

OFFICE OF COLLECTOR OF TAXES,
DISTRICT OF COLUMBIA,
Washington, September 2, 1889.

GENTLEMEN: I have the honor to submit statements in detail of the business of this office for the fiscal year ending June 30, 1889, as follows:

GENERAL FUND.

This statement shows the amount of tax balances with which this office was debited at the beginning of the fiscal year commencing July 1, 1888. Also the amount of tax levies, real and personal, for the year ending June 30, 1889, together with the amounts received for collection on account of the water fund, licenses, dog tax, fees, penalties, etc., and the amount collected on account of the same, during the fiscal year ending June 30, 1889.

SPECIAL ASSESSMENTS.

This statement shows the amount received on account of work done under the late board of public works, the kind and amount of securities received in payment, and the account to which credited.

PERMIT FUND.

This statement shows the receipts and disbursements on account of deposits made for the improvement and repair of alleys, sidewalks, sewers, etc., and the receipts under the compulsory permit system, assessed in accordance with acts of Congress approved July 9, 1886, March 3, 1887, and July 18, 1888, respectively.

SPECIAL DEPOSITS.

This statement shows the amounts deposited in the United States Treasury, through this office, to the credit of the respective appropriations and funds.

I take pleasure in stating that the most gratifying results have attended our efforts to enforce the collection of arrears of personal tax under the appropriation for this purpose of $2,000, made by Congress, which became available July 1, 1888. The force of this office was put to work immediately after the commencement of the fiscal year making up bills for all unpaid personal taxes in arrears, but having the current work of the office to do at the same time it was not until October that the real work of collecting began. A collector was then sent out who was directed to present and demand payment of these accounts; to carefully investigate all accounts that should prove uncollectible, with reasons therefor, and report the facts to this office. During the time he has been engaged on this work, about nine months, he has collected about $10,000, and reported, after investigation, about $14,000 uncollectible, thereby erasing from the books accounts that have been carried for years, many of which were of doubtful value in the first place, and death, removal from the city, and other causes have rendered the balance valueless. In addition to the above he has discovered and added to the books accounts on which the tax aggregating $1,000 would perhaps have been a loss to the District. Judging from the success already obtained we anticipate a material increase in the District revenues from this source after all of these accounts will have been presented, and a reduction of the large personal tax arrears balance by the discovery and elimination of worthless accounts. The result has proved the statements heretofore made by this office of the existence of a large personal tax arrears balance made up of fictitious values, a showing alike discreditable to tax-payers and the officers of the District charged with its collection. Our experience in collecting these accounts is that when personal demand is made for payment the response is prompt, and without this demand a large number who are liable for this tax will evade their obligation.

This work will be continued under the appropriation for the next fiscal year and we anticipate as good results.

The recommendation in our last report in reference to authority being obtained from Congress to strike from the books all personal tax arrears previous to 1884, is here renewed. The absurdity of carrying these balances is clearly apparent. They are uncollectible, the majority of them being founded upon arbitrary assessments by the assessor, and they serve no other purpose than to swell the already large unpaid balances due the District.

The importance of a systematic elimination from the books of this office of taxes charged against property owned by the United States, District of Columbia, and property exempt by law, such as school, church, and asylum property, is urged and immediate action requested.

Attention is called to a class of property on which the taxes due equal, and in many cases exceed, the value of the property itself. The vigorous enforcement of the law provided for such cases would result in material benefit to the district. As it now is the owners or trustees are deriving all the benefit therefrom in the way of rents or occupancy, and avoiding the responsibilities.

The return to the one-payment system for the collection of taxes is earnestly urged. It would, I am sure, be for the benefit of tax-payers and of great convenience to the office.

Attention is called to the importance of the enactment of a comprehensive law regulating tax sales. An effort was made at the last session of Congress, which resulted in passage of the act approved October 12, 1888, which while an improvement on previous laws on the subject, yet it is not nearly so perfect as it should be. The importance of a law that will stand the test of judicial scrutiny would be of lasting benefit to the District. The failure of all previous laws to adequately protect purchasers at tax sales has deterred many from investing.

We renew our recommendation for the compilation of an arrears book of taxes. Every year adds to the already large accumulation of tax books, making it more difficult to prepare certificates of taxes with that accuracy necessary to guard the District from loss through error. The number of records to be examined in the preparation of these certificates makes it very tedious, with no absolute certainty as to their correctness. The compilation of all arrears into one book would facilitate their preparation with some degree of accuracy. In addition, it would enable purchasers to see at a glance the tax condition of the property they contemplate purchasing, and thus avoid delays. Many persons are deterred from purchasing property at our annual tax sales from the fact that no record of the tax condition can be obtained without delay and expense, and we think that a book of this kind would add a number to the list of purchasers.

A radical change is necessary in the manner of answering requests for tax bills. These bills are furnished only for the current year unless otherwise requested, a fact unknown to a large number of tax-payers, and it is a cause of endless trouble, inconvenience, and loss. At the same time, in the present condition of the records, it is impossible, on the receipt of a request for bills, to give the time necessary for a search for arrears. The dissatisfaction expressed by tax-payers to discover, after a lapse of years, or after the consummation of purchase of property, that the books contain a charge for unpaid taxes bearing a high rate of interest, for which no bills have been rendered, while all subsequent years taxes have been paid, is not at all surprising. Another difficulty arises from the fact that bills are made out in separate divisions, viz, current tax, arrears, and special assessments, and a request for bills to either one of these divisions will not insure bills for taxes that may be charged on the books of the other two. This is not as it should be, and your attention is called to it that some remedy may be suggested. We think our recommendation for the preparation of an arrears book is the true solution of the difficulty.

Attention is called to the fact that by reason of increase in population, together with additional duties required of this office, the business has increased to such an extent as to render additional force absolutely necessary. I have estimated for a deputy collector at $2,000 and assistant cashier at $1,600 per annum, being an addition of two clerks to the force, the minimum number necessary to accurately and promptly dispatch the business of the office. The necessity of providing for a deputy collector to assist the collector in the proper discharge of his various duties is imperative. The business of the office has increased to such an extent that the time of the collector is almost wholly taken up in affixing his signature to receipts, letters, and certificates, to the exclusion of other business of equal importance, the law only providing for the performance of this duty, in the necessary absence or inability of the collector, by the cashier. The many inquiries of tax-payers, both verbal and in writing, require a large share of the attention of the collector, which, if not personally given, causes dissatisfaction, and it is

impossible under the present circumstances to give that attention without neglecting other important duties. The duties of the cashier have increased to such an extent as to render the appointment of an assistant absolutely necessary. Aside from the great amount of labor imposed upon the cashier resulting from increase of current work, there are at least six months in the year when it is impossible for one cashier to accomplish what is required of him. The responsibilities and peculiar nature of the duties of this position will not permit any but experienced clerks to assume the same, and as this experience is only obtained by actual performance of the duties, the necessity of providing for an assistant is apparent.

I can not too persistently urge upon the Commissioners the necessity of asking Congress that this addition to the force of this office be allowed. It will not only expedite business, but add to the security of the performance of the same—a consideration of great importance to tax-payers, and one they have a right to demand. The duties of the office are increasing every year; as the city is built up tax-payers become more numerous, consequently more force is required to give that attention to promptly meet the demands for information and more facilities are required to enable tax-payers to transact their business with as little delay as possible.

Better and safer facilities should be accorded this office for the transmission of the receipts from taxes, etc., to the United States Treasury. At present the proper performance of this duty depends entirely upon the care and attention of the messenger selected, who is in no way responsible for the safety of the funds intrusted to him. When it is taken into consideration that in addition to the large sums of money carried by him he has thousands of dollars' worth of checks, which form part of the daily deposit, which must be turned into cash before the deposit can be made, the importance of this recommendation is apparent. To cash these checks he is compelled to visit all the banks, at each of which he adds to the already large amount of money in his possession, and thus increases his risks both as to the liability of loss from error in count and other causes. No loss has ever been sustained by this office in the collection and transmission of the funds to the Treasury; yet the large sums carried in this way through the streets, with no other protection than that bestowed by the messenger in charge, offers rare temptation to thieves. This responsible duty has been performed daily for years by Officer Goodwin Pierce, to whose efficiency and faithfulness in the discharge of the same great credit is due.

As a remedy I would respectfully suggest that the Secretary of the Treasury be requested to designate a bank of deposit in this city in which the funds of the District may be temporarily deposited. This would not only facilitate the handling of the large amount of money paid into the District, but would reduce materially the liability to loss and error.

I have the honor to submit the following estimate of expenses of this office for the fiscal year ending June 30, 1891:

Collector of taxes	$4,000	Three clerks, at $1,200	$3,600
Deputy collector of taxes	2,000	Messenger	600
Cashier	1,800	Contingent expenses	1,500
Assistant cashier	1,600		
Book-keeper	1,600	Total	22,300
Four clerks, at $1,400	5,600		

Respectfully submitted.

E. G. DAVIS,
Collector of Taxes, District of Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

General fund.	Dr. To amount charged.		Cr. By amount collected.	
To balance of taxes due July 1, 1888:				
Realty tax—				
For the years 1845 to 1870			$1,216.82	
For year ending June 30—				
1872			139.15	
1873	$904.45		1,740.38	
1874	9,921.62		3,600.34	
1875	21,294.66		6,353.98	
1876	8,282.47		2,667.21	
1877	26,415.73		3,533.41	
1878	14,785.38		4,875.94	
1879	22,444.46		5,316.71	
1880	33,035.21		5,399.67	
1881	31,201.58		5,211.90	
1882	28,595.73		6,224.66	
1883	31,355.55		6,952.08	
1884	35,054.51		8,658.76	
1885	41,959.12		10,765.90	
1886	49,475.03		14,152.85	
1887	76,679.29		30,774.62	
1888	193,764.56		123,434.26	
		625,168.75		241,018.64
To amount of levy for the year ending June 30, 1889		1,713,202.41		1,533,021.23
To amount collected in excess of what was charged to the collector on account of assessment of general tax arrears, 1845 to 1870	1,216.82			
To amount collected in excess of what was charged to the collector on account of assessment of general tax for the year ending June 30—				
1872	139.15			
1873	835.93			
		2,191.90		
Personal tax:				
For the year ending June 30—				
1877	30,066.84			
1878	71,827.52			
1879	34,124.35			
1880	15,765.92			
1881	23,123.68			
1882	7,351.52			
1883				
1884	14,079.50		11.25	
1885	22,079.48		153.37	
1886	27,989.21		1,499.25	
1887	18,595.70		3,007.20	
1888	15,315.99		9,400.30	
		280,319.71		14,071.37
To amount of levy for the year ending June 30, 1889		175,930.08		155,872.91
To amount of penalty on taxes:				
Realty tax—				
For the years 1845 to 1870			988.67	
For the year ending June 30—				
1872			175.84	
1873	878.75		1,608.10	
1874	3,372.20		3,372.20	
1875	6,122.37		6,122.37	
1876	2,605.16		2,605.16	
1877	2,990.53		2,990.53	
1878	3,613.58		3,613.58	
1879	3,750.09		3,750.09	
1880	3,348.29		3,348.29	
1881	3,134.58		3,134.58	
1882	3,165.59		3,165.59	
1883	3,062.86		3,062.86	
1884	3,403.77		3,403.77	
1885	3,598.26		3,598.26	
1886	3,507.94		3,507.94	
1887	8,272.27		8,272.27	
1888	18,040.40		18,040.40	
1889	7,685.26		7,685.26	
		80,551.90		82,445.76
To amount of penalty on taxes collected in excess of what was charged to the collector on account of assessment of general tax arrears, 1845 to 1870	988.67			
To amount of penalty on taxes collected in excess of what was charged to the collector on account of assessment of general tax for year ending June 30, 1872	175.84			

General fund.	Dr. To amount charged.		Cr. By amount collected.	
To amount of penalty on taxes—continued.				
To amount of penalty on taxes collected in excess of what was charged to the collector on account of assessment of general tax for year ending June 30, 1873.	$729.35	$1,893.86		
To amount of penalty on taxes:				
Personal tax—				
For the year ending June 30—				
1885	21.89		$21.89	
1886	214.73		214.73	
1887	1,003.53		1,003.53	
1888	1,068.00		1,068.00	
1889	390.31		390.31	
		2,698.46		$2,698.46
To amount of miscellaneous items:				
Washington redemption fund—				
Principal $2,741.65				
Interest 297.62				
	3,039.27		3,039.27	
Special tax (corporation of Washington)—				
Principal $4,478.69				
Interest 8,599.51				
	13,078.20		13,078.20	
Licenses	157,579.94		157,579.94	
Dog tax	6,975.10		6,975.10	
Permit fees	4,081.00		4,081.00	
Fees for certificates	2,534.00		2,534.00	
Material furnished plumbers	37.58		37.58	
Advertising (1875 to 1889)	3,513.28		3,513.28	
Advertising special assessments—				
1875	102.58		102.58	
1888	792.46		792.46	
Market rents—				
Eastern $3,428.00				
Western 6,032.50				
Georgetown 1,203.84				
Washington 7,500.00				
	18,164.34		18,164.34	
Police court fines—				
District of Columbia $24,649.96				
United States 9,755.89				
	34,405.85		34,405.85	
Criminal court fines	1,157.09		1,157.09	
Building permits	8,499.63		8,499.63	
Redemption assessment certificates	740.72		740.72	
Inspecting and proving gas meters	392.00		392.00	
Sale of old material	719.79		719.79	
Pound fees	503.00		503.00	
Rent of District of Columbia property	2,515.75		2,515.75	
Use of steam roller	24.00		24.00	
Judgment favor District of Columbia	7,637.75		7,637.75	
Engineer's license	2,116.85		2,116.85	
		268,610.18		268,610.18
Water fund—				
Water-main tax advertised—				
Principal $5,524.26				
Interest 3,192.09				
	8,716.35			
Water rents, taps, permits, etc	237,737.78			
		246,454.13		246,454.13
Total		3,397,021.38		2,544,192.68
To amount of increase in assessments as per assessor's certificates:				
Realty tax	1,173.23			
Personal tax	1,155.25			
		2,328.48		
By amount of reductions in assessments as per assessor's certificates:				
Realty tax			2,038.98	
Personal tax			14,372.29	
				16,411.27
By balance of uncollected taxes:				
Realty tax			565,657.44	
Personal tax			273,088.47	
				838,745.91
Total		3,399,349.86		3,399,349.86

RECAPITULATION.

To amount collected on account of:		
Realty tax	$1,774,039.87	
Personal tax	169,944.28	
Penalties	85,144.22	
Miscellaneous items	268,610.18	
Water fund	246,454.13	
		$2,544,192.68
To amount of reductions in assessments		16,411.27
To amount of uncollected taxes		838,745.91
Total		3,399,349.86
By cash deposited in U. S. Treasury	2,515,476.35	
By drawback certificates	28,156.36	
By erroneous tax-lien certificates	395.86	
By paving scrip	164.11	
		2,544,192.68
By amount of reductions in assessments		16,411.27
By amount of uncollected taxes		838,745.91
Total		3,399,349.86

NOTE.—The following items in the above exhibit were collected through this office for the use of third parties holding the liens representing the taxes:

Special taxes (principal and interest)	$13,078.20
Washington redemption fund (principal and interest)	3,039.27
General taxes for the years ending June 30, 1872 and 1873, respectively, represented by tax-lien certificates (principal and interest)	588.20
Total	16,705.67

SPECIAL ASSESSMENTS.

General account (for work for which no lien certificates were issued):		
Amount collected (cash)	$345.61	$345.61
Certificate accounts (for work for which certificates were issued and are held by the "sinking fund commission"):		
Amount collected—		
Principal	45,399.06	
Interest	40,087.37	
		85,486.43
Received in payments—		
Bonds	15,400.00	
Interest	12,401.00	
Coupons	1,608.00	
Interest	1,238.05	
Drawbacks	2,250.91	
Cash (sale $5,447.33)	52,588.95	
		85,486.91
First National Bank (for work for which certificates were issued and held by third parties):		
Amount collected (cash)—		
Principal	293.30	
Interest	470.92	
		764.22
Condemnation of land for alleys	1,159.28	
Costs of advertising	789.86	
Costs	159.37	
		2,108.52

RECAPITULATION.

Amount received on account of—	
General account	$345.61
Certificate account	85,486.91
First National Bank	764.22
Condemnation of lands	1,159.28
Costs advertising	789.88
Costs	159.37
Total	88,705.27

NOTE.—One hundred dollars collected on account of certificate account, being a duplicate payment, was refunded by return of bond.

PERMIT FUND.

Receipts (subject to requisition by auditor):		
Deposits July, 1888	$5,189.50	
August, 1888	3,513.28	
September, 1888	4,181.64	
October, 1888	3,102.88	
November, 1888	2,317.19	
December, 1888	944.28	
January, 1889	343.95	
February, 1889	1,436.89	
March, 1889	2,098.01	
April, 1889	11,171.84	
May, 1889	4,288.05	
June, 1889	2,808.49	
		$41,396.00
Disbursements:		
June 11, 1888	235.23	
June 25, 1888	1,949.23	
August 6, 1888	2,056.55	
November 21, 1888	2,500.00	
January 3, 1889	5,000.00	
January 29, 1889	5,000.00	
April 8, 1889	5,000.00	
April 9, 1889	107.20	
May 22, 1889	5,000.00	
June 17, 1889	472.26	
June 17, 1889	10.03	
June 25, 1889	313.89	
June 25, 1889	5,000.00	
		32,644.39
Balance in hand		8,751.61
Unapplied balances of deposits received prior to July 1, 1888, as follows:		
Due depositors' accounts	1,904.39	
Due accounts received from engineer's department, October 6, 1887	2,611.34	
		4,515.73
Total balance		13,267.34

COMPULSORY PERMIT FUND.

Collected under act of July 9, 1886	$1,315.66
Collected under act of March 3, 1887	3,678.22
Collected under act of July 18, 1888	12,654.17
	17,648.05

NOTE.—By order of the Commissioners of the District of Columbia the amount to credit of the plumber's license fund was paid to the auditor August 15, 1888, to refund to the depositors ($231).

SPECIAL DEPOSITS.

Repayment to appropriations:		
Metropolitan police	$104.15	
Inspecting and proving meters	423.75	
Condemnation of land	945.23	
Rent of District of Columbia property (one-half)	2,031.67	
Repairs	1.00	
Street-lamps	1,564.17	
General expenses water department	822.15	
Improving streets	654.47	
Sale of old material	90.79	
Salaries and contingent expenses	122.86	
Cleaning sewers and basins	.20	
Public schools	308.53	
Permit work, 1889	16,208.22	
Paupers	293.69	
Expenses Washington Asylum	8.64	
Telegraph and telephone service	5.60	
Courts	108.50	
Fish wharves	459.09	
Public order	218.03	
Relief of the poor	4.00	
Fire department	7.40	
Detecting crime	44.16	
Judicial expenses	77.50	
		$24,503.80
Police fund	2,955.54	
Matthew Wright, legacy	446.09	
		3,401.63
Total		27,905.43

D.

SPECIAL ASSESSMENTS.

OFFICE OF THE COMMISSIONERS, DISTRICT OF COLUMBIA,
SPECIAL ASSESSMENT DIVISION,
Washington, July 1, 1889.

GENTLEMEN: I have the honor to make the following report for the year ending June 30, 1889:

This division has, under the various orders of the Commissioners of the District of Columbia, jurisdiction over all records and papers relating to special assessments made for any class of work except water-main assessments, and is charged with the duty of preparing the assessments for work done under the compulsory permit system, and, after approval, to record the same, issue bills therefor for service on parties interested, care for the returns of such service, keep correct accounts with each lot and part of lot affected by any assessment that may have been or that shall be made, investigate and adjust all claims for drawbacks under the several acts of Congress, prepare for issue all certificates that may be found due, and keep proper records and accounts thereof, both as to issue and redemption.

The current work of this division is very great. Sixty-four hundred and fifty-one communications and papers have been briefed, acted on, and filed during the year, making a total of 63,825 to date, exclusive of the reports made upon certificates as to taxes issued from the office of the collector of taxes.

The special assessments are classed as follows:

Old corporation of Washington, for each of the following kinds of work, viz: Sidewalk, curbing, carriage-way, sewer, nuisance, water and gas services, lighting streets, opening alleys, etc., prior to February 21, 1871.

M. G. Emery assessments, including all work done subsequent to February, 21, 1871, the assessments for which were approved by M. G. Emery, mayor.

H. D. Cooke assessments, including all work done subsequent to February 21, 1871, the assessments for which were approved by H. D. Cooke, governor.

Board of public works, including all assessments made by the board of public works for work done under contracts made by said board.

Commissioners of the District of Columbia, including all assessments made by the Commissioners of the District of Columbia for work done under board of public works contracts and extensions made by the Commissioners of the District of Columbia for the improvement of avenues and streets.

Alley assessments, for work done in alleys under board of public works contracts and extensions made by the Commissioners of the District of Columbia.

Condemnation assessments, for the payment for land condemned and taken for alleys. These condemnations are made by the United States marshal's jury, and an assessment therefor is made against property benefited thereby.

Compulsory permit, including the assessments made under acts of Congress approved July 9, 1886, March 3, 1887, and July 18, 1888.

All lien certificates issued upon the several classes of assessments are recorded in this division, and an account is kept with each certificate, showing amounts of payments thereon, principal, interest, and costs; and when satisfied the certificate is taken up, canceled, and filed.

DRAWBACK CERTIFICATES.

Issued during the year:		
Under act approved June 19, 1878		$39.66
Under act approved June 27, 1879		2,272.09
Under act approved July 5, 1884		45.32
Under act approved February 12, 1889:		
To lot owners	$24,954.45	
To holders of scrip	7,610.97	
		32,565.42
Total issue during year		34,922.49

Total amount found due to date under the various acts of Congress so far as adjusted is as follows:

Acts of 1878 and 1879:		
Assessments of Commissioners and board of public works	$624,617.84	
Assessments of H. D. Cooke, governor	211,987.11	
		$836,604.95
Act of 1884		118,333.42
Act of 1889:		
To property owners	37,836.26	
To holders of scrip	7,610.97	
		45,447.23
Total found due to date		1,000,385.60
Total amount issued:		
Acts of 1878 and 1879:		
Assessments of Commissioners and board of public works	615,807.30	
Assessments of H. D. Cooke, governor	211,048.31	
		826,855.61
Act of 1884		118,333.42
Act of 1889:		
To property owners	24,954.45	
To holders of scrip	7,610.97	
		32,565.42
Total issue to date		977,754.45
Awaiting satisfactory evidence before issue:		
Acts of 1878 and 1879:		
Assessments of Commissioners and board of public works	8,810.54	
Assessments of H. D. Cooke, governor	938.80	
		9,749.34
(For detailed statement see Appendix I).		
Act of 1889 (for detailed statement see Appendix II):		
To property owners		12,881.81
Total awaiting issue		22,631.15

Of the total issue there have been redeemed as follows:

In payment of general taxes:		
As per last report	$381,437.12	
Received during year	28,156.36	
		$409,593.48
In payment of special assessments:		
As per last report	550,052.97	
Received during year	2,250.91	
		552,303.88
(For detailed statement see Appendix III).		
Total redemption to date		961,897.36
Amount outstanding		15,857.09

EIGHT PER CENT. CERTIFICATES OF INDEBTEDNESS.

Amount outstanding June 30, 1888, as per last report, par		$109,600.00
Amount redeemed:		
In payment of special assessments, par	$15,300.00	
By United States Treasurer, *ex officio* commissioner of the sinking fund, as per information kindly furnished from his office, par	27,350.00	
Total redemption, par		42,650.00
Outstanding June 30, 1889, par		66,956.00

To which should be added the accrued interest at 6 per cent. per annum from maturity.

SPECIAL ASSESSMENTS PLEDGED TO THE REDEMPTION OF THE 8 PER CENT. CERTIFICATES OF INDEBTEDNESS.

Amount outstanding June 30, 1888, as per last report		$255,347.39
Collected for account of lien certificates, exclusive of interest and costs	$45,399.06	
Collected for general account, no lien certificates issued	345.61	
		45,744.67
Outstanding June 30, 1889		209,602.72

This statement does not include the accrued interest upon lien certificates held by the United States Treasurer, *ex officio* commissioner of the sinking fund, nor the amounts charged to the several street railroad companies, which remain unpaid upon the records of this division.

LIEN CERTIFICATES NOT HELD BY THE UNITED STATES TREASURER, EX OFFICIO COMMISSIONER OF THE SINKING FUND.

Amount of outstanding lien certificates issued by the late board of public works and held by third parties, for the redemption of which there are outstanding special assessments, as per last report, par	$66,623.90
Redeemed during the year by collections, by sale of property, and by surrender of lien certificates in satisfaction of assessments, par (for detailed statement see Appendix IV)	4,643.41
Outstanding June 30, 1889, par	61,980.49

(For detailed statement see Appendix V.)

OUTSTANDING LIEN CERTIFICATES FOR WHICH THERE IS NO ASSESSMENT, BUT SUBJECT TO REDEMPTION BY DRAWBACK CERTIFICATES UPON PRESENTATION AND DEMAND UNDER EXISTING LAW.

June 30, 1888, as per last report, par	$223.71
Redeemed during the year, par	15.97
Outstanding June 30, 1889, par	207.74

(For detailed statement see Appendix VI.)

There are outstanding certificates held by third parties for which there is no assessment to collect or other mode of redemption under existing law. The money due was, by the property owners, paid into court in 1873 and subsequently turned over to J. A. Magruder, treasurer of the board of public works, and not applied to the payment of these lien certificates. In my last annual report I suggested the advisability of providing for the redemption of these lien certificates by the issue of draw-back certificates receivable in payment of arrears of general taxes, but no action thereon was taken. The holders of these certificates have a just claim against the District, and justice seems to demand that payment therefore should be made in some form. I recommend this subject to your favorable consideration. The amount is not large and a detailed statement will be found in Appendix VII.

COMPULSORY PERMIT ASSESSMENTS.

Under the several acts of Congress approved July 9, 1886, March 3, 1887, and July 18, 1888, assessments have been made in accordance with the orders of the Commissioners of the District of Columbia, dated February 11, 1887, October 19, 1887, and August 21, 1888—

Amounting, in the aggregate, to date (for detailed statement of which see Appendix VIII) to		$37,013.38
For account of these assessments collections have been made as follows:		
Prior to June 30, 1888	$5,905.39	
During year ending June 30, 1889	17,648.05	
Total collections to date		23,553.44
		13,459.94
Deduct amount canceled by order of Commissioners of the District of Columbia upon property held as exempt		632.53
Outstanding June 30, 1889		12,827.41

OLD CORPORATION ASSESSMENTS.

The records of the Old Corporation assessments were transferred from the office of the assessor to the special assessment division on the 21st day of April, 1887, in accordance with the order of the Commissioners of that date. During the year collections have been made for account of these special assessments to the amount of $4,278.67, exclusive of interest.

The amount outstanding has been considerably reduced by the act of Congress, approved February 12, 1889, by which the assessments made for work done subsequent to the date of the organic act, February 21, 1871, were revised and reduced to one-third the cost of the work, and by decrees of the supreme court of the District of Columbia upon proceedings in certiorari, because of some alleged informality at the time such assessment was made. Considerable difficulty is experienced

in endeavoring to comply with the order of the supreme court calling for evidence of record relative to these assessments, owing to the chaotic condition of the records of the old corporation, which remain untouched in the vault. It is almost impossible to find any desired paper, and in more than one instance the call for evidence has "none found" for answer, and, of course, the decree is adverse to the District.

The bulk of these assessments is due, when collected, to the holders of scrip or stock issued therefor, and the cancellation of an assessment leaves the scrip unprovided for, and it at once becomes the basis of a claim against the District.

SALES.

The existing laws relative to special assessments and the mode of enforcing them by sale of delinquent property require that "upon the application of the holder of the certificate of indebtedness" the property shall be advertised twice a week for three weeks in the regular issue of some paper published in the District. The supreme court has decided that when a property is sold for any delinquent tax it must be sold for all then owing by it, of whatever nature. The law regulating the mode of procedure in cases of delinquent general taxes prescribes a different course from that in cases of special assessments.

In accordance with the act of Congress approved October 12, 1888, all the property in arrears for special assessments was advertised with the property in arrears for general taxes, but upon an opinion from the office of the attorney of the District of Columbia, all property in arrears for special assessments only was withdrawn, because the act of August 10, 1871, had not been observed. I have on file applications from the holders of the lien certificates, requesting the sale of the property liable therefor. This fact has been reported to the board and instructions requested as to the course to be pursued. At the sale for delinquent general taxes January 22, 1889, there were sold lots also indebted for special assessments to the amount of $2,846.92, and accrued interest from various dates, which assessments have been recorded as "satisfied by sale." A detailed statement of the lots sold will be found in Appendix IX.

FORCE.

The attention of the Commissioners is invited to the total absence of any appropriation for the maintenance of this division of their office, as such.

In view of the amount and importance of the business transacted, the amount of collections from special assessments of all classes, and the necessity of keeping proper books of record and accounts, I recommend a separate appropriation for this division, believing that the interests of the District would be better served by competent clerks, permanently assigned to duty here and familiar with the duty required of them. As it is now, the entire force is composed of men detailed for the purpose, and paid some from one appropriation and some from another.

The work of preparing the assessments under the compulsory permit system and keeping the accounts thereof is continuous, and is of such a nature that competent clerks only should touch it, as the assessment when made must be absolutely correct and all proceedings in connection therewith must be in exact accordance with law.

Very respectfully,

WM. OSCAR ROOME,
Special Assessment Clerk.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

APPENDIX I.—*Statement of drawback certificates awaiting issue.*

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
1862	Michael Welch	502	23	Sixth	$35.30
2080	C. L. and J. D. Ketchum	248	Of S. 8	K	5.28
2243	Frederick Warren	983	Of 10	G	5.61
2340	James H. Rowland	628	14	New Jersey	12.22
2365	Thomas H. Wheatly	914	S. 15	Ninth	.63
2400	John H. W. Burley	195	S. 69	O	12.67
2469	Antonio Carnevero	346	Of 5	Eleventh	4.55
2478	Cornelius Donovan	184	Of S. 18	Sixteenth	3.56
2480	Mary M. Evans	339	S. 12	Eleventh	5.25
2598	James McManners	122	5	Twentieth	.66
2617	J. T. Sullivan	456	Of 11	Seventh	13.49
2618	do	456	Of 10	Seventh	13.49
2671	Augustus Koch	378	O	D	2.70
2727	J. L. Fowler	465	70	Seventh	1.56
2760	Henry Martin	405	13	Eighth	27.33
2876	Joseph Pypher	527	Of S. 3	Fourth	4.99
2877	do	527	Of S. 2	Fourth	3.34
2886	Frederick W. Jones	933	S. 15	Ninth	2.85
3067	Minerva Rodgers	222	1	Fourteenth	5.68
3112	J. K. Plant	378	Of 5	D	1.33
3168	C. E. Bopp	977	25	Eleventh	24.21
3217	Henry and John McShane	177	S. 5	Sixteenth	21.91
3230	Simeon Newcomb	313	B	Eleventh	20.38
3332	James Reich	623	5	H	13.89
3352	Leonard S. Chapman	339	8	Eleventh	14.63
3501	Henry Walter	682	S. D	Delaware	15.20
3553	William Moore, trustee	935	S. 23	Ninth	.62
3554	do	935	S. 24	Ninth	.64
3566	Lucy R. Reid *et al*	200	10	K	1.66
3588	Frederick Kroell	210	S. 29	Rhode Island	.57
3622	George W. and S. L. Phillips	Res. D	15	Maine	3.93
3666	Josiah M. Vale	202	S. 30	Fourteenth	.30
3810	A. and E. D. Sharp	240	101, 102	Corcoran	6.59
4122	Charles G. Barber	134	S. 4	Q	2.54
4144	John J. Joyce	207	S. 74	Fourteenth	8.22
4147	Ellen E. Dyer	256	3	D	17.42
4151	John France	292	1, 2	D	14.07
4155	Hannah A. Foster	227	6	D	3.50
4214	W. B. Stone, jr., heirs	292	1	D	15.64
4339	James Crehan	515	Of 25	Fourth	10.22
4345	M. E. and L. H. Herndon	338	Of S. 16	Eleventh	.53
4346	Masselon Harrison *et al*	338	Of S. 14	Eleventh	.46
4379	Abel G. Davis	570	Of S. R	E	6.44
4391	L. Bernhard *et al*	194	65	P	33.16
4402	Rachel Butler	536	Of 5	Fourth	4.07
4413	Nicholas Becker	527	Of S. 2	Fourth	1.78
4445	John Gaegler	S. of 516	Of 9	Fourth	2.38
4631	Levi W. Kimball	242	S. 1	Fourteenth	.32
4655	Margaret Kelly *et al*	828	S. 7	M	.02
4657	do	829	S. 35	M	.05
4734	Catharine A. Barrett	319	Of 14	Eleventh	15.00
4845	F. R. Windsor	934	44	H	3.24
4846	Harrison Williams	101	22	I	1.18
4848	Thomas M. S. Williams	293	Of 5	C	.63
4860	Isaiah and E. Waters	752	8	H	1.89
4861	Dennis Callahan	366	Of S. 40	Columbia	.29
4928	Amanda M. Faron	502	6	N	5.50
4953	James Parshall	525	Of 2	Fourth	2.37
4955	J. D. Harrison	343	Of 2	I	34.46
4966	Sarah Ann Griffin	530	10	Fourth	3.72
4967	Michael Horrigan	530	Of C	Fourth	1.63
5056	William Lamborn	338	Of S. 18	Eleventh	2.20
5131	Charles Myers, heirs	48	84	First	10.75
5132	Mary A. Sullivan	1027	22	H	1.55
5168	Thomas Millburn	777	9	H	2.59
5177	George Miller	516	Of 24	K	2.70
5178	do	516	Of 25	K	2.01
5204	John Foller	518	S. 1	Fifth	7.21
5244	Mary Day	163	Of S. 27	Connecticut	11.67
5299	T. J. Robinson	401	Of 5	Ninth	7.04
5301	Ignatius Ruppert	N. of 515	Of 7	New York	3.41
5305	Sarah Kane	859	19	H	2.59
5307	Alexander Speir	369	Of 20	Ninth	28.35
5311	J. B. Oliver	401	Of 8	Ninth	11.05
5324	Mary Ann Sheckells	317	Of 12	Eleventh	15.00
5378	Maria Bailey	485	S. 28	Fifth	13.21
5423	George Norbeck	378	Of 4	D	1.76
5473	Freeman Brush	904	Of 28	Eighth	4.16

APPENDIX 1.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
5474	Frank Beckert, sr	904	Of 28	Eighth	$2.33
5499	John D. Schneir	513	Of 13	Fifth	3.25
5506	Charles Kemmer	454	12	Seventh	13.57
5534	Charles W. Robinson	516	Of 28	Fourth	2.02
5535	P. Murtaugh	515	Of 28	Fourth	2.09
5540	William Lamborn	338	Of S. 19	Eleventh	2.51
5571	Francis E. Upperman	264	S. 1	Thirteen-and-a-half	4.18
5580	Harrison P. Lewis	448	60	Sixth	18.06
5612	George C. Cornwell *et al*	226	6	E	3.30
5643	John Foller	555	Of 4	New York	5.47
5652	Mary J. Hurst	48	85	First	4.46
5692	John Lyons	40	4	Twenty-fourth	24.85
5695	John Mountenney	250	Of 1	H	.30
5709	Eunice B. Sawyer	37	Of 7	Twenty-fourth	5.31
5738	Sarah Lampere	37	S. C	Twenty-fourth	3.30
5868	Mary Ann Harvey	349	S. A	Tenth	2.05
5882	John Saul	455	11, 12	Seventh	10.06
5888	George Savage	348	Of 1	D	1.75
5904	Annie Wilson	381	Of 5	Tenth	.58
5933	S. L. Phillips	457	S. P	D	28.22
5956	Margaret Randall *et al*	638	S. M	First	20.55
5958	John L. Kidwell	348	Of 3	D	11.48
5961	Almon Bryant	328	S. 14	Fifth	8.07
5989	Roger Adamson	454	12	Seventh	6.58
6002	Joseph Follansbee	571	S. 42	First	.52
6005	Henry Eicholtz	527	Of S. 2	Fourth	2.12
6009	Abel G. Davis	570	Of S. Q	E	4.39
6010	Joseph Follansbee	571	Of S. 14	First	.19
6012	Thomas Downey	515	Of 25	Fourth	2.09
6015	Henry Evans	526	Of 4	Fourth	3.20
6044	John Casey	982	7	H	3.62
6060	H. McLinden	343	Of 2	I	.33
6068	David M. Kelsey	365	Of 99	Tenth	12.73
6074	Isaac Dorsey	514	Of 8	New York	4.08
6083	George H. Edmonds	525	Of 6	New York	5.67
6097	Richard Truman	516	Of 27	Fourth	4.10
6161	John Rogers	457	Of 3	D	9.69
6193	John M. Roberts	904	Of 21	Eighth	7.80
6248	Lavinia Center	257	A	Thirteen-and-a-half	82.32
6423	Cornelius Lent	366	S. 15	O	16.00
6430	Joseph E. Snodgrass	447	Of 13	O	1.17
6431	William R. Todd	447	S. M	O	9.66
6454	Sophia Warner	512	Of 16	O	.77
6456	John Slater	512	S. 40	O	.48
6458	do	512	S. 39	O	.50
6482	Robert Mahoney, trustee M. E. Lloyd	545	Of S. 24	M	9.33
6463	do	545	Of S. 25	M	1.20
6472	Edward Edwards, trustee	163	Of S. 21	L	10.56
6497	W. W. Curtis	74	Of 150	Market space	2.62
6510	John F. Niedfeldt	516	Of 27	Fourth	1.82
6532	John B. Lord	594	Of 6	Fourth	3.53
6533	Henry Lybrand	629	S. O	First	.48
6559	William Windom	686	26, 27	B	2.79
6560	Meyer Silver	686	20	B	.55
6568	James Watson	313	S. 6	Eleventh	18.76
6578	Joseph Edwards	211	Of 8	Fifth	10.56
6580	do	211	S. 28	Fifteenth	10.56
6654	Margardt Lenox	380	Of 5	Tenth	17.03
6668	Joseph W. Boucher	16	Of 41	E. & W. market space	1.59
6671	William C. Magee	48	Of 16	Prospect	11.27
6694	C. Boyer	539	Of 19	F	1.65
6698	Cornelius Shea	829	S. 11	Fifth	32.29
6702	W. A. Franklin, trustee	725	Of 10	First	11.91
6720	J. B. Sanborn and C. A. King	454	11	Seventh	11.42
6730	H. B. Owen	283	Part	B	19.02
6734	J. G. Robinson	429	14	Seventh	11.92
6735	Mary Ann Keyworth	429	1	Seventh	10.89
6748	Anna M. Wilcox	79	Of 11	Twenty-second	19.83
6755	Lucian Hayden	239	S. 6	R	8.85
6756	Charles A. Harroday	302	S. 41	Eleventh	8.38
6801	Ellen Deeble	110	Of 28	High	9.30
6846	D. A. Straker			Seventh street road	26.25
6972	Eva Seldner	570	Of S. G	D	60.33
7073	James F. Caden	450	19	Seventh	11.41
7076	Edward Champlin	325	Of 5	Twelfth	6.42
7144	Nicholas Vermillion	302	Of S. 57	Eleventh	2.51
7145	do	302	Of S. 56	Eleventh	3.15

APPENDIX I.--*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
7153	John S. Hickman	829	S. 19	Fifth	$6.45
7159	William McGobuck	725	S. C	First	10.79
7197	Matilda Kohler	305	S. 1	Eleventh	9.32
7200	John L. Kidwell	289	S. 32	Thirteenth	23.45
7208	John Knower	167	S. 37	Fifteen-and-a-half and Sixteen-and-a-half	12.38
7216	Charles Kiernan	536	Of 6	Four-and a-half	25.61
7217	A. Robb	539	Of 11	Four-and-a-half	13.29
7228	H. F. Maul, trustee	355	Of S. 6	G	1.17
7232	W. H. Martin	368	Of 12	Tenth	23.00
7241	William M. Shuster	423	Of 11	Seventh	8.86
7300	Charles Myers	101	Of 17	High	12.97
7323	Israel B. Thompson	344	Of S. 11	Tenth	51.77
7346	H. W. Drakely			Seventh street road	29.48
7500	John A. Simons	447	S. H	O	9.64
7733	John Casey	522	S. 3	N	3.26
7734	Patrick H. McNantz	867	14	Sixth	.03
7752	William E. Tuck	834	17	Sixth	.02
7753	do	834	14	Sixth	.02
7754	do	834	16	Sixth	.02
7853	Thomas T. Crittenden, trustee	28	Of 20	K	4.27
7968	Robert White	16	Of 41	Bridge	32.10
7976	James Devlin	37	19	Twenty-third	12.84
7978	J. M. Schofield	38	Of 12	Bridge	113.52
7979	George Eberly	38	Of 11, 10	High	5.45
7984	Samuel Miller	40	2	I	19.47
7985	Elizabeth V. Welch	40	4	I	23.39
7995	A. H. Heir	59	106	First	3.53
8000	David Edes and C. Bodisco	64	Of 147	Green	5.80
8025	William E. Tuck	834	15	Sixth	.03
8259	John Cherry	104	1	Twentieth	16.76
8304	Ann Phillips	117	Of 2	L	12.19
8305	do	117	Of 2	L	12.20
8312	William H. Phillips	126	Of 31	Seventeenth	6.49
8317	Granville Malcolm	134	S. 10	Nineteenth	5.13
8318	do	134	S 11	Nineteenth	4.86
8324	H. M. Lansdale, trustee	142	Of 14	Eighteenth	14.97
8325	Elizabeth E. Savoy	158	Of 14	N	55.53
8326	Samuel L. Bryan	159	S. 30	Rhode Island avenue	4.10
8328	Charles H. Moulton	210	S. 30	Rhode Island avenue	.57
8338	Fannie Smith	163	7	K	21.15
8343	William Thompson	166	Of S. 23	Seventeenth	30.46
8345	Francis B. Stockton	167	22	Fifteen-and-a-half and Sixteen-and-a-half	14.93
8346	Benjamin Farrar, trustee	167	Of 1	Madison and Jefferson Places	9.06
8348	James Alden	167	Of 24	Fifteen-and-a-half and Sixteen-and-a-half.	9.36
8359	John Hitz	180	40	Q	12.86
8361	Ella Mason	180	S. 49	Sixteenth	43.19
8368	Edward Foskey	181	S. 28	O	13.33
8371	James H. Wright	182	58	Sixteenth	41.39
8372	John Connolly *et al*	182	52	Sixteenth	41.40
8377	H. V. Byington	184	1	K	71.02
8385	Lloyd P. Pumphrey	193	S. 86	Fifteenth	27.83
8386	Charles T. Davis	193	92	Q	11.98
8391	Julian W. Bean	195	S. 68	O	12.67
8406	J. T. Langley	401	Of 8	Ninth	6.85
8407	Jerry L. Page	401	Of 8	Ninth	5.39
8409	Martha Isherwood	402	12	Eighth	40.80
8410	Rose M. Kleiber	403	Of 4	Ninth	.14
8411	William H. Ward	403	11	Eighth	35.15
8417	G. A. Sandford	405	Of 6	Ninth	11.22
8419	H. H. Wurdeman	405	Of 5	Ninth	40.88
8425	Morgan Donoho	407	Of 6	Ninth	25.56
8426	James E. Law	413	13	F	10.89
8435	Frederick Warner	422	Of S. H	Eighth	12.71
8436	do	422	Of S. 1	Eighth	7.17
8459	Rose B. Darrell	446	E	Sixth	8.82
8460	William Lord	447	1	N	12.55
8462	T. J. Hanna and F. Jones	447	Of 10	Seventh	10.86
8463	Mary E. Shelley	447	S. 9	Seventh	8.18
8468	Sarah H. Waring	448	Of S. 55	N	23.91
8472	Ann E. McLaughlin	450	21	Seventh	11.42
8475	Patrick O. Donnoghue	454	11	Seventh	6.53
8496	George D. Burch	478	23, 24	Sixth	21.66
8497	Edward Gallant	479	28	Sixth	28.67
8498	Robert Clarkson	481	Of 14	Fifth	4.47

APPENDIX I.—*Statement of drawback certificates awaiting issues*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
8499	Isaac Rosenthal	485	S. 27	Fifth	$13.21
8507	George W. Rothwell	206	65	Pierce Place	7.54
8511	Addison M. Smith	206	122	Pierce Place	6.04
8512	Edwin Potbury	206	116	Pierce Place	6.04
8513	Thomas Gardner	206	113	Pierce Place	6.04
8515	Hormon Burns	206	19	S	6.82
8518	Charles F. Clauson	207	53	S	8.86
8519	John Henderson	207	60	S	8.78
8523	George W. Riggs *et al.*	208	S. 102	Fourteenth	.37
8524	G. W. Riggs and G. H. Plant	208	Of 102	Fourteenth	41.30
8525	M. W. McCartney	208	S. 12	Q	15.85
8526	Elisha Goddard	208	S. 100	Fourteenth	41.30
8528	C. C. Willard	209	Of S. 19	Q	5.97
8532	Charles H. Moulton	210	S. 31	Rhode Island	.57
8535	George H. Brown	211	S. R	Rhode Island	.57
8542	John F. Cook, trustee	214	S. 15	Vermont	32.39
8543	William Wall	214	S. 16	Vermont	15.46
8550	Hugh McCullough	217	2	K	44.31
8567	Johnson Hellen	223	Of 1	G	66.90
8570	H. S. Bowen, trustee	227	Of 11	E	3.03
8575	D. Naylor	234	S. 24	Fourteenth	.29
8579	....do	234	S. 20	Fourteenth	.30
8580	....do	234	S. 19	Fourteenth	.30
8594	Cornelia V. Godey	238	S. 37	Eourteenth	.25
8595	....do	238	S. 38	Fourteenth	.29
8596	Henry Jackson	238	S. 34	Fourteenth	.25
8597	....do	238	S. 36	Fourteenth	.25
8598	....do	238	S. 35	Fourteenth	.25
8604	Levi W. Kimball	242	S. 1	Fourteenth	38.00
8605	William P. Thompson	242	S. 54	Vermont	39.24
8607	Florant H. Meline	243	2	N	40.46
8610	Moses Kelley, trustee	247	Of 4	Massachusetts	30.01
8613	Ellen T. Cowen	247	M	L	27.07
8617	George W. Drew	248	Of 8	K	32.56
8628	Mary Cratley	N. of 508	S. 4	Rhode Island	12.07
8636	Edward Brooks	529	17	Third	12.38
8647	George Burgess	240	S. 66	Q	10.19
8662	James Taylor	241	Of S. 55	Q	1.99
8684	Mary Ann Gibson	252	S. 1	Thirteenth	31.44
8685	Joseph Abbott	252	Of 1	Thirteenth	34.91
8686	....do	252	Of 1	G	175.26
8689	Zepheniah Jones	256	8	E	6.88
8690	....do	256	Of 9	E	16.45
8691	David G. Day	256	2	D	17.36
8692	E. Schwinghammer	257	S. 1	Thirteen-and-a-half	12.92
8697	C. A. Reardon	263	Of S. A	Thirteen-and-a-half	7.15
8711	Chester A. Colt	284	23	Twelfth	.38
8716	Eddie S. Warren	285	Of 8	I	.33
8718	Maurice Reidy	286	Of 8	Thirteenth	10.05
8726	Noah H. Swayne	290	Of 4	E	43.87
8731	Rebecca B. Haslip	291	Of 12	Twelth	17.20
8733	C. and R. Coltman	292	2	D	10.77
8734	A. Provost, trustee	292	Of 4	Thirteenth	82.26
8735	Ulysses Ward	593	Of 1	Twelfth	9.86
8736	C. Puckhaven	293	Of 17	Twelfth	6.36
8739	Wilson E. Brown	294	Of 2	C	16.11
8740	John J. Sullivan	294	A	C	13.59
8741	Josephine D. Hicks	296	Of 21	Twelfth	8.13
8743	John H. Clarke	297	S. L	Twelfth	31.29
8744	F. Daukworth	297	S. N	Twelfth	7.95
8745	John Welsh	299	1	Twelfth	78.91
8766	J. D. Harris			Seventh-street road	.05
8768	H. N. Drakely			Seventh-street road	.03
8775	D. A. Straher			Seventh-street road	.03
8778	Jane D. Jackson			Seventh-street road	.03
8782	Josiah Whitney			Seventh-street road	.02
8785	Frederick Snyder's heirs			Seventh-street road	.02
8795	William N. Caldwell	85	Of 158	High	.88
8799	Margaret Minor	288	Of 15	H	26.44
8805	I. G. Naylor	515	102	Fourth	1.75
8812	F. Esputa, trustee	903	S. L	Eighth	3.69
8828	Addison M. Smith	206	118	Pierce Place	6.04
8844	John O. Evans	250	Of 14	Fourteenth	49.65
8854	Susan Decatur	167	29	Seventeenth	65.94
8860	S. B. Perkins	184	Of S. 20	Sixteenth	24.90
8939	Henry Wills, trustee	165	17	Connecticut	7.93
8954	W. D. C. Murdock	90	7	Connecticut	20.97
8968	J. C. Bancroft Davis	165	18	Connecticut	7.94

APPENDIX I.—*Statement of drawback certificates awaiting issues*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
9002	Alfred G. Haley	306	S. 2	Eleventh	$14.40
8003	....do	306	S. 7	Eleventh	14.42
9006	Annie Williams	313	Of 3	Twelfth	.37
9022	Sarah P. Woodward	319	Of 16	Eleventh	22.13
9030	A. Lee	324	Of 5	Twelfth	3.65
9036	William Scrivener	333	S. 16	Eleventh	13.11
9037	Thomas Green	335	4	Eleventh	16.68
9040	Leonard S. Chapman	339	12	Eleventh	14.63
9041	....do	339	11	Eleventh	14.63
9043	....do	339	9	Eleventh	14.63
9049	Walter S. West	340	S. 18	Eleventh	16.04
9050	J. L. Roberts	340	Of 11	Eleventh	7.22
9052	Abraham Marshall	341	S. G	Eleventh	16.13
9053	....do	341	S. H	Eleventh	16.13
9054	Isaac Hertzberg	343	Of 5	Eleventh	17.25
9059	Sophia M. White	345	Of 12	Tenth	18.10
9060	L. S. Woodward, trustee	345	Of 12	Tenth	22.24
9064	Charles V. Gordon	345	Of 8	Eleventh	18.00
9065	Sophia M. White	345	Of 12	Tenth	23.69
9069	James Carter	346	Of 5	Eleventh	9.94
9076	M. J. Sebley and B. F. Guy	348	E. ½ of 2	D	2.20
9077	Jacob E. Lyons	349	Of 1	Tenth	18.59
9081	Frederick Valk	350	Of 1	Tenth	1.30
9085	Annie R. Gilbert and J. Whitney	361	Of S. 36	Ninth	35.43
9118	L. H. Stephens	366	S. 11	O	2.10
9119	Lucy C. Allen	366	O	P	14.71
9122	James M. McNair	366	S. 60	Ninth	5.61
9129	Margaret A. Herold	368	S. 29	Ninth	5.23
9131	Nathan Brown	368	16	N	36.81
9144	Adam Schriver	377	Of 22	Ninth	9.81
9147	Hugh Gelston	379	Of 9	D	1.76
9154	Isaac Sickles	381	Of 6	Tenth	.52
9159	John C. Deatley	389	32	F	8.66
9163	S. H. Sherwood, trustee	398	Of S. 10	Ninth	.45
9166	Harriet Robinson	399	Of S. 24	Eighth	23.23
9167	John Nelson, jr	399	Of S. 19	Eighth	13.57
9168	....do	399	Of S. 20	Eighth	10.49
9169	Susan C. Nicholson	399	Of S. 26	Eighth	17.32
9170	....do	399	Of S. 27	Eighth	17.33
9171	Frederick Rapp	399	S. D	O	.16
9176	Z. Jones and J. T. Given	624	52	H	24.28
9180	Laura E. Kimball	676	19	H	19.97
9181	J. Jones and J. Maguire	677	Of S. 44	H	7.96
9184	H. W. Meehan	690	Of 7	B	58.03
9185	....do	690	S. 6	B	1.71
9190	David Shea	719	7	H	2.20
9191	William S. Huntington	722	S. 26	E	20.30
9192	....do	722	S. 22	E	20.31
9202	Charles H. Holden	762	6	Second	.19
9203	....do	763	6	Second	3.11
9210	John C. Wright	829	S. 29	Fifth	1.23
9211	....do	829	S. 28	Fifth	1.23
9212	John O'Herring	858	1	H	2.20
9213	Cecelia Evans	876	5	South Carolina	23.98
9214	Abner Kelly	889	6	H	2.59
9215	Jere McCarthy	890	26	H	2.39
9216	William Williams	898	Of 23	Seventh	6.26
9222	Cornelius T. Bowen	912	24	H	2.59
9223	James E. Arnold	926	Of 12	Eighth	14.09
9226	Frederick W. Jones	933	S. 17	Ninth	2.85
9227	....do	933	S. 16	Ninth	2.85
9228	....do	933	S. 20	Ninth	2.54
9234	Mary A. Williams	977	26	Eleventh	18.35
9236	Mary Harrison	977	27	Eleventh	24.21
9239	Martha H. McKnight	1000	11	Eleventh	24.21
9244	George R. Milburn	1026	S. 60	I	9.82
9245	Mary F. Lewis	1026	S. 52	I	19.55
9256	James D. Jackson			Seventh-street road	36.46
9257	Josiah Whitney			Seventh-street road	27.17
9258	Frederick Snyder, heirs of			Seventh-street road	18.23
9263	J. T. Dudley			Seventh-street road	14.74
9269	Henry O. Johnson	499	Of 14	Sixth	16.54
9270	....do	499	Of 13	Sixth	15.14
9272	I. G. Naylor	525	S. 20	Fourth	2.12
9276	W. G. Parkhurst	525	Of 5	Fourth	2.99
9277	Charles Zimmerman	526	Of 7	Fourth	2.44
9279	Albert Boulden	526	Of 8	L	27.95
9280	Lemuel Boteler	526	Of 7	Fourth	1.96

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed	Square.	Lot.	Street or avenue.	Amount.
9281	Patrick Foley	527	2	Fourth	$1.93
9282	D. C. McGiven	527	Of S. 3	Fourth	2.46
9283	Elizabeth Herbert	527	Of S. 2	Fourth	9.66
9290	J. P. Hilton, trustee	528	Of S. 12	Fourth	22.27
9293	John O'Connor	529	Of 8	Fourth	2.20
9297	G. C. G. Sauer	530	Of 6	Fourth	2.24
9298	George Usher	531	Of 5	Fourth	18.30
9299	Amon Green	531	Of 2	E	10.14
9300	G. P. Page	532	Of 9	E	10.14
9301	Samuel Steinmetz	532	Of 9	E	10.14
9302	John B. Ward	532	Of 6	Fourth	3.42
9305	H. N. Gilbert	532	Of 5	Fourth	3.72
9306	Horace J. Gray	533	6	C	26.78
9307	Bartley Knopp	537	S. ½ of 17	Four-and-a-half	24.04
9316	William E. Clarke	32	15	Virginia	18.42
9342	Henry Rabe	814	S. A	Fourth	1.00
9412	A. Lee	324	Of 5	Twelfth	3.53
9419	John Walter, sr	323	Of 6	Twelfth	.44
9420	Francis Hanna	324	Of 4	Twelfth	.08
9422	Edward Champlin	325	Of 5	Twelfth	.25
9432	John H. Clarke	297	S. L	Twelfth	2.18
9434	F. Dankworth	297	S. N	Twelfth	1.79
9437	John Welsh	299	1	Twelfth	4.87
9439	John Walter, sr	323	Of 5	Twelfth	.68
9441	Josephine D. Hicks	296	Of 21	Twelfth	2.24
9473	Rebecca B. Haslip	291	Of 12	Twelfth	6.16
9495	S. J. Thomas	284	24	Twelfth	20.60
9501	William Payne	65	Of 139	Dunbarton	.14
9504	Sarah Ashford	70	Of 128	Dunbarton	3.44
9505	W. W. McNeir (heirs)	70	Of 128	Dunbarton	15.10
9506	Lewis Mackall	70	Of 118	Montgomery	31.90
9509	Jane Myers	74	Of 150	Market	4.70
9510	H. A. Klopfer	75	Of 8	I	24.59
9511	John Poor	75	Of 10	Twenty-second	19.03
9525	Ann Kedgie	86	18	Nineteenth	11.95
9529	Joseph Woodland	94	Of 83	West	4.27
9541	Thomas Dalton	513	Of 21	N	6.15
9546	James G. Naylor	514	S. 42	New York	3.69
9547	do	514	S. 43	New York	3.70
9550	J. A. Linton, trustee	515	Of 28	Fourth	4.47
9552	Samuel Miller	515	20	L	54.45
9553	J. G. Naylor	515	104	Fourth	1.82
9554	do	515	101	Fourth	1.75
9555	C. P. Russell	N. 515	Of 1	Fourth	9.56
9556	James G. Naylor	N. 515	S. 40	Fourth	2.17
9579	P. Carroll	515	Of 25	Fourth	2.09
9581	James G. Naylor	N. 515	S. 36	New York	16.51
9582	do	N. 515	S. 33	New York	2.99
9584	W. H. Pearson	515	Of 21	L	9.60
9588	William Reid	S. 516	Of 21	Fourth	3.73
9589	A. C. Varella	516	Of 12	Fifth	.11
9590	Ann C. Fietgler	516	Of 28	Fourth	2.65
9601	J. B. Burke	518	Of S. 2	Fourth	6.07
9603	J. G. Naylor	525	S. 22	Fourth	1.94
9604	do	525	S. 21	Fourth	1.89
9609	John McKimm	555	3	New York	19.90
9610	Archy Brown	556	Of S. 4	Third	9.76
9618	Edward Eberbach	567	B	New Jersey	1.62
9624	James R. McAllister	568	26	Second	41.26
9630	Joseph Fugitt	570	12	Second	34.15
9664	Lucy Vigal	89	103	Beall	98
9669	Thomas T. Crittenden, trustee	28	Of 19	K	1.02
9704	Alex. Elliott, jr	733	Of S. 9	First	.31
9713	Henry Pautzenbeiter	816	S. B	Fifth	6.20
9723	Joseph Tyne	32	Of 17	Virginia	4.31
9744	Joseph R. Ashley	939	4	B	1.60
9747	Levi J. Bryan and Charles A. Moore	32	Of 17	Virginia	5.22
9751	Robert S. King	819	S. B	Fifth	14.52
9753	Sallie S. Saxton	692	S. B	First	.59
9754	Jane Lowery	692	S. F	First	.59
9755	Edwin G. Horn	692	S. G	First	.61
9756	Cornelia C. Drury	733	Of S. 12	First	5.72
9757	Edward Hobart	733	Of S. 11	First	.16
9758	do	733	Of S. 10	First	.27
9759	Alex. Elliott, jr	733	Of S. 8	First	.22
9768	J. T. Dudley			Seventh street road	.01
9792	W. P. Johnson	558	Of 4	Third	20.07
9793	Erastus Poulson	323	Of 6	Twelfth	19.05

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
9794	Eliza Duff	324	11	Eleventh	$13.23
9802	W. D. C. Murdock	90	5	Connecticut	13.42
9822	Mary Day	163	Of S. 27	Connecticut	4.13
9851	Henry Key	210	42	Fifteenth	17.72
9855	John McCarty	209	Of 12, 13	Fifteenth	15.45
9890	James Taylor	238	Of 1	S	7.95
9894	Richard C. Gill	306	S. 21	S	9.85
9898	William W. Dean	306	S. 30	S	9.85
9924	Daniel F. Chandler	36	32	M	21.70
9932	J. C. Haviland	70	Of 3	M	12.80
9933	P. W. Dorsey	70	Of 3	M	20.89
9937	Henry Schæfer	407	Of 13	Eighth	.49
9940	Fitzhugh Coyle	432	Of 6	Eighth	2.41
9949	Richard Posey	286	Of 12	I	2.35
9996	Anna Williams	313	Of 3	Twelfth	.16
11029	John McCarty	209	Of 12, 13	Fifteenth	27.86
11078	Francis Buchanan	319	Of 9	Twelfth	4.12
11090	James A. Magruder	99	Of 230	West	41.60
11091	James A. Magruder heirs	87	Of 199	West	28.25
11096	Leonard Simmermacker	1002	S. 36	I	2.37
11117	John Farnham, trustee	557	S. 40	Pierce	17.05
11159	W. Tucker	344	Of 11	I	21.75
11167	G. W. Hauptman	289	Of 17	Twelfth	2.01
11179	R. I. Fleming	282	S. 12	Twelfth	10.94
11235	F. W. Rest, trustee	903	S. C	Eighth	1.31
11241	Truman Brush	904	Of 28	Eighth	.42
11266	Michael Thompson, trustee	321	Of 16	Eleventh	3.22
11281	M. W. Galt	321	Of 13	Eleventh	.33
11286	do	321	Of 13	Eleventh	1.18
11287	Tobias Purrington	321	Of 13	Eleventh	1.17
11338	Walter Stewart	319	Of 15	Eleventh	.30
11339	do	319	Of 13	Eleventh	.29
11340	do	319	Of 12	Eleventh	.16
11341	Edward Younger	318	Of 11	Eleventh	4.39
11365	Charles V. Gordon	345	Of 8	Eleventh	1.65
11366	Walter S. West	340	Of 18	Eleventh	.16
11368	Leonard S. Chapman	339	11	Eleventh	3.03
11370	do	339	12	Eleventh	1.52
11375	James Carter	346	Of 5	Eleventh	.34
11377	Leonard S. Chapman	339	6	Eleventh	3.03
11379	do	339	8	Eleventh	2.34
11380	do	339	9	Eleventh	1.52
11382	Henry Turner	345	Of 7	Eleventh	.35
11385	Lewis Johnson	345	B	Eleventh	5.67
11395	Henry Turner	345	Of 6	Eleventh	.66
11400	Abraham Marshall	341	S. H	Eleventh	3.57
11401	do	341	S. G	Eleventh	3.57
11408	William Brown	344	Of 4	Eleventh	.70
11427	James Watson	313	S. 6	Eleventh	3.71
11437	Helen Chambers	315	Of 9	Eleventh	3.13
11443	Mary Ann Sheckels	317	Of 12	Eleventh	2.72
11466	Eliza Moorehead	466	10	Seventh	9.28
11474	James Halley	437	Of 1	Seventh	1.03
11523	Minerva Rogers	222	Of 1	Fourteenth	8.84
11548	Samuel Byington	469	33	Alley	32.28
11566	Thomas Collins	469	19	Alley	14.31
11587	S. H. Howell	468	S. R	Alley	17.13
11590	do	468	S. Q	Alley	16.02
11591	do	468	S. P	Alley	13.78
11642	Sophia Jones	411	Of 39	Alley	6.40
11676	George R. Hall	163	S. 31	Connecticut	6.27
11684	J. P. Klingle	207	62	S	8.68
11685	John O. Evans	217	19	Fourteenth	14.67
11686	do	217	20	Fourteenth	14.00
11715	John O. Evans	250	Of 14	Fourteenth	2.78
11716	George W. Driver	250	Of 16	Fourteenth	3.95
11717	do	250	Of 15	Fourteenth	3.61
11718	Mary E. Moreland	250	Of 14	Fourteenth	3.59
11719	Charles Meyert	411	Of 36	Alley	18.00
11765	Thomas Lundy	74	Of 7	Pennsylvania	15.40
11771	John H. Smoot	29	Of 6	Bridge	2.58
11776	Maria Emerich	30	Of 47	Bridge	2.32
11818	J. M. Schofield	38	Of 12	Bridge	3.10
11846	Robert White	16	Of 41	Bridge	7.79
11899	Lewis Clements	377	Of 11	Tenth	38.54
11964	M. Riley	858	Of 13	I	15.70
11994	Hiram M. Green	467	2	G	5.19

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
11998	Theodore Holtzclaw	467	36	G	$5.60
12026	S. H. Howell	468	S. S.	Alley	12.67
12080	John O. Evans	217	22	Fourteenth	14.00
12092	J. L. Savage	336	B	Alley	12.09
12120	James F. and Charles H. Slater	411	22	Alley	18.83
12121	Thomas Young	133	73	R	37.32
12207	George Orme, heirs	29	Of 14	Bridge	2.39
12240	C. P. P. Wroe, trustee	S. 516	Of 22	Fourth	2.25
12285	R. C. Dunlap	27	11	Pennsylvania	.04
12288	Eleanor O'Toole	168	S. 17	Pennsylvania	3.41
12289	Mary M. Drury	168	S. 18	Pennsylvania	5.45
12314	L. E. McCauley	221	Of 3	Pennsylvania	3.74
12317	W. H. Perkins	119	Of 9	Pennsylvania	1.83
12325	John Little	118	Of 3	Pennsylvania	12.27
12326	Benjamin Beall	118	Of 5	Pennsylvania	4.54
12330	John Smith	119	Of 10	Pennsylvania	2.32
12354	Catharine Connor	625	Of S. 2	Massachusetts	12.66
12368	M. A. Kerr	221	17	H	10.32
12400	Bladin Dulaney	118	Of 2	Pennsylvania	.45
12403	Armand Jardin, trustee M. Dubois	168	Original 16	Pennsylvania	1.87
12404	Terrence Drury	168	Of 17	Pennsylvania	1.18
12405	Christian F. Schmidt	168	Of 17	Pennsylvania	.20
12417	Elizabeth F. Denny	166	6	Pennsylvania	1.09
12430	W. H. Perkins	119	Of 9	Pennsylvania	.24
12434	John F. Mountemsey	250	Of 1	H	.21
12437	Peter Parker	167	1	Pennsylvania	.13
12438	——do	167	2	Pennsylvania	.13
12439	L. E. McCauley	221	Of 3	Pennsylvania	.39
12444	Mary M. Drury	168	S. 18	Pennsylvania	2.61
12460	J. D. Harrison	343	Of 2	I	.41
12483	Eddie S. Warren	285	Of 8	I	.14
12489	A. Jackson, trustee	401	Of 4	Ninth	4.60
12509	Augustus, Koch	378	S. 0	D	.29
12510	John Rodgers	457	Of 3	D	1.09
12512	Augustus Koch	378	Of S. B	D	.21
12516	John L. Kidwell	348	Of 3	D	1.14
12520	H. H. Wurdeman	405	Of 5	Ninth	4.09
12537	T. A. Sanford	405	Of 6	Ninth	1.22
12540	Elon Boorehead	404	Of 4	Ninth	.80
12550	Morgan Donohoo	407	Of 6	Ninth	6.17
12553	Rose M. Kleiber	403	Of 4	Ninth	.01
12557	Jerry L. Page	401	Of 8	Ninth	.13
12561	J. B. Oliver	401	Of 8	Ninth	1.11
12563	T. J. Robinson	401	Of 5	Ninth	1.70
12573	George Savage	348	Of 1	D	.40
12585	Jos. Radcliffe, trustee	404	Of 1	H	.46
12619	W. P. Johnson	558	Of 4	Third	1.67
12635	Wm. Brown	209	Of S. 21	Q	3.70
12638	A. E. D. Sharp	240	Of S. 101	Corcoran	.04
12641	M. W. McCartney	208	S. 12	Q	.70
12642	John H. Lewis	209	Of S. 26	Q	.47
12646	Zalmon Richards	240	S. 28	Corcoran	.15
12648	——do	240	S. 23	Corcoran	.18
12649	——do	240	S. 27	Corcoran	21
12650	Mary A. Sullivan	1027	S. 22	H	.09
12664	Innis N. Palmer	121	Of 2	F	6.06
12668	Annie E. May	379	Of 7	D	.28
12671	Hugh Gelston	379	Of 9	D	.12
12676	W. Q. Force	378	8	D	.06
12677	——do	378	S 7	D	.02
12699	William Burke, trustee	209	Of S 24	Q	.48
12717	Annie Foley	424	Of 10	N	2.60
12720	Joseph Weaver	368	Of 16	N	.71
12731	Z. D. Gilman	368	S 52	N	.70
12741	George V. and Martha Leech	181	S 118	Sixteenth	.31
12769	Noah L. Jeffries	199	Of 14	Fifteenth	2.59
12814	Mary Harrison	977	Of 27	Eleventh	3.38
12821	Harrison Williams	101	22	I	.21
12855	John Duffy	48	4	P	4.53
12875	L. C. Baker, *et al*	403	Of 11	Eighth	.30
12885	Florant H. Meline	243	Of 2	Ninth	3.03
12906	Elizabeth V. Welch	40	4	I	1.59
12907	L. C. Baker, *et al*	403	Of 12	Eighth	1.00
12909	Thomas M. S. Williams	293	Of 5	C	.12
12919	H. A. Klopfer	75	Of 8	I	5.12
12924	Zeph. Jones, *et al*	256	8	E	.20
12941	George A. Bohrer	978	Of 20	Eleventh	3.85
12972	Lucy R. Reid, *et al*	200	10	I	.89

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
12986	Cornelius Shea	525	Of 1	Third	$34.83
12997	G. T. Longley	401	Of 8	Ninth	.62
13026	S. H. Howell	468	S. T	Alley	12.78
13039	Hirman W. Green	467	Of 2	Alley	8.46
13042	Ed. C. Carrington	209	S 50 51	Alley	95.01
13043	James J. Towles	209	Of S 49	Alley	15.34
13054	Patrick Murray	776	S 7	Alley	33.37
13063	Maurice Diggin	776	S 29	Alley	11.99
13103	J. L. Savage	336	A	Alley	11.05
13105	Owen Black	336	31	Alley	16.59
13153	J. L. Fowler	465	Of 70	Seventh	.44
13159	Lewis Dorr	434	Of 1	Seventh	5.61
13212	J. Wise and Callahan	582	Of S 22	Alley	18.70
13217	Hilroy Davis	582	Of S 14	Alley	2.70
13218	A. Brooks and A. Bowen	582	Of S 16	Alley	28.23
13242	Jesse T. Peck	285	S 11	I	45.55
13273	Daniel Carroll of Duddington	690	2	C	18.76
13287	Gabriel Mark	582	Of S 1	Alley	11.62
13292	William Q. Force	582	Of S 11	Alley	27.81
13293	Samuel Adams	582	Of S 11	Alley	17.43
13327	Levi W. Kimball	242	S 1	Fourteenth	7.60
13330	Ann Jenkins	211	Of 18	Fourteenth	8.01
13364	Elizabeth T. Queen	453	Of 17	I	95.73
13371	William Orme	27	Of 2	Pennsylvania	9.68
13396	John P. Ingle	166	Of 1	Pennsylvania	72.15
13398	Terrence Drury	168	Of 17	Pennsylvania	5.00
13401	Jane F. Redfern	166	Of 4	Pennsylvania	2.04
13402	F. A. and C. A. Schneider	166	Of 3	Pennsylvania	2.05
13412	Elizabeth F. Denny	166	6	Pennsylvania	4.09
13414	Peter Parker	167	2	Pennsylvania	7.30
13415	Francis P. Blair	167	3	Pennsylvania	7.21
13416	Peter Parker	167	1	Pennsylvania	7.29
13417	Christian F. Schmidt	168	Of 17	Pennsylvania	2.75
13418	Joseph Shwartz	168	Of 15	Pennsylvania	3.85
13433	Benjamin Farrar, trustee	167	Of 1	Sixteen-and-a-half	42
13442	John O. Evans	217	16	Vermont	3.47
13444	do	217	15	Vermont	3.47
13449	William Wall	214	S. 16	Vermont	1.57
13454	John O. Evans	217	17	Vermont	96.02
13458	John W. Starr	941	Of 10	Tenth	19.81
13459	David Keenan	964	Of 7	Tenth	1.42
13463	Lucy C. Allen	366	S. O	P	.81
13471	Abner B. Kelly	889	11	H	.80
13473	do	889	12	H	.88
13474	Jere McCarthy	890	S. 26	H	.30
13514	Mary E. Shoemaker	74	Of 134	Second	2.94
13515	Ellen Deeble	110	Of 28	High	.72
13523	F. R. Windsor	934	S. 44	H	.80
13535	Moses Kelly, trustee	247	G	Massachusetts	4.37
13536	do	247	H	Massachusetts	4.37
13548	Charles T. Davis	193	S. 92	Q	1.62
13550	John Harrington	51	Of 55	First	.35
13551	Catharine Homiller	50	Of 74	First	.30
13564	Carl Mueller	397	Of 7	Q	3.89
13565	Benedict Milburn	241	S. F	Q	3.50
13570	James Taylor	241	Of S. 55	Q	8.46
13571	Mary A. Ward	241	Of S. 55	Q	.53
13576	John Casey	522	S. 3	N	.15
13588	William McStewart	479	S. 13	Sixth	1.93
13589	Edward Gallant	479	S. 28	Sixth	1.86
13593	John Miller	W. 484	4	Massachusetts	16.53
13597	Charles E. Upperman	342	A	Massachusetts	6.81
13600	William Windom	686	S. 27	B	.35
13635	George C. Cornwell *et al.*	226	6	E	.43
13641	William P. Thompson	242	S. 54	Vermont	3.91
13677	Abner B. Kelly	889	11	H	2.59
13680	do	889	10	H	2.59
13687	Austin P. Brown	283	23	Massachusetts	6.95
13691	Robert Mahoney, trustee	545	Of S. 24	M	6.03
13692	do	545	Of S. 25	M	.97
13712	George W. Sumner	366	S. M	P	1.79
13714	J. B. Clagett	477	Of 4	Sixth	3.58
13732	William Windom	686	Of S. 26	B	.15
13733	William E. Humphrey	442	Of S. 41	Sixth	.04
13737	Joseph M. Pierce	403	Of 12	Eighth	1.45
13738	George F. Muth	403	Of 12	Eighth	5.18
13740	Zeph. Jones	256	Of 9	E	.46
13760	John Niland	51	Of 7	Twenty-third	7.76

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
13761	Charles F. Clausen	207	53	S	$1.36
13777	Elizabeth Kurtz	377	Of 17	F	10.72
13786	Thomas. C. Wilson	289	6	F	.21
13793	W. J. Conway	776	S. 1	H	.26
13805	Francis A. Jones	70	Of 130	Montgomery	.27
13806	John Burns	858	S. 9	H	.20
13811	William E. Chandlee	245	S. L	Vermont	3.13
13812	Zalmon Richards	240	S. 29	Corcoran	.15
13813	A. and E. D. Sharp	240	S. 102	Corcoran	.08
13817	Laura E. Kimball	676	19	H	2.99
13820	John Casey	982	Of 7	H	.19
13838	William E. Chandlee	245	S. M	Vermont	3.13
13870	Robert White	16	Of 41	Bridge	2.13
13880	John Henderson	207	60	S	2.43
13881	J. P. Klingle	207	62	S	.25
13908	John France	292	Of 1	D	.27
13914	William B. Stone, jr., heirs of	292	Of 1	D	1.52
13919	John France	292	Of 2	D	.22
13924	Ella Mason	180	S. 49	Sixteenth	4.28
13933	Lavinia Carter	257	S. A	Thirteen and-a-half	4.06
13939	Annie R. Gilbert and J. Whitney	361	Of S. 26	Ninth	1.33
13948	Alexander Duchay	245	S. I	Vermont	3.30
13949	William E. Chandler	245	S. N	Vermont	3.13
13954	Z. Jones and J. T. Given	624	52	H	2.66
13957	Abner B. Kelly	889	10	H	.80
13958	....do	889	2	H	.10
13959	....do	889	3	H	.10
13960	....do	899	1	H	.45
13962	Thomas Milburn	777	Of 9	H	.26
13964	Sarah Kane	859	Of 19	H	.04
13971	David Shea	719	S. 7	H	.35
13980	John F. Ofile	74	Of 124	Second	2.13
13986	Joseph Woodland	94	Of 83	West	.48
14020	Zelia Mason	494	Of 15	Alley	12.86
14027	Rebecca J. Wilson	498	16	Alley	31.79
14047	William J. Metzerott	209	S. 24	Alley	15.87
14058	James Crown	209	Of S. 55	Alley	25.72
14090	James Develin	37	Of 19	Twenty-third	2.05
14143	James M. McNair	366	S. 60	Ninth	.99
14149	Lewis F. Perry	399	Of S. 7	Ninth	3.09
14174	Margaret A. Herald	368	S. 29	Ninth	.20
14180	John O. Herring	858	S. 1	H	.07
14191	Hayes Speakman	174	Of 1	Sixteenth	17.67
14200	John J. Almy	212	Of S. 56	Massachusetts	11.37
14201	....do	212	Of S. 55	Massachusetts	11.37
14206	Cornelia Shea	829	S. 11	Fifth	3.45
14214	Henry A. Tayloe	400	Of S. 16	Ninth	2.00
14216	Joseph W. Boucher	16	Of 41	E. & W. market space	.34
14218	Michael Coffey	140	Of 5	L	1.13
14223	D. C. McGiven	527	Of S. 3	Fourth	.18
14224	Patrick Foley	527	Of S. 2	Fourth	.19
14230	J. B. Burke	518	Of S. 2	Fourth	$.66
14244	Richard W. Bruff	873	S. 45	Pennsylvania	8.80
14247	S. L. Loomis, trustee	85	S. C	L	1.88
14248	....do	85	S. B	L	1.88
14266	Elizabeth Herbert	527	Of S. 2	Fourth	.12
14271	C. P. P. Wroe, trustee	S. 516	Of 22	Fourth	.22
14279	Henry Keller	529	Of 6	Fourth	.58
14281	John A. Blau	529	Of 8	Fourth	.25
14282	John O'Connor	529	Of 8	Fourth	.18
14283	Lemuel Boteler	526	Of 7	Fourth	.18
14290	J. G. Naylor	515	101	Fourth	.03
14291	P. Murtaugh	515	Of 25	Fourth	.19
14292	Thomas Downey	515	Of 25	Fourth	.21
14293	J. G. Naylor	515	102	Fourth	.17
14294	James D. Smith	S. 516	Of 20	Fourth	.97
14301	J. G. Naylor	515	104	Fourth	.20
14303	James Crehan	515	Of 25	Fourth	.82
14305	Henry Eicholtz	527	Of S. 2	Fourth	.21
14307	Rachel Butler	526	Of 5	Fourth	.03
14317	Eliza Boreland	197	Of S. 2	L	2.40
14318	Sarah Ann Griffin	530	10	Fourth	.94
14322	George Usher	531	Of 5	Fourth	4.69
14325	W. H. Smith	198	Of S. 16	L	.48
14328	John B. Lord	518	S. 29	Fourth	.78
14329	....do	518	S. 28	Fourth	.78
14330	....do	518	30	Fourth	.78
14331	....do	529	Of 6	Fourth	.91

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
14333	Mary Mackey	527	Of S. 2	Fourth	$0.48
14334	James Parsball	525	Of 2	Fourth	.30
14335	J. G. Naylor	525	20	Fourth	.08
14342	Ann Phillips	117	Of 2	L	1.62
14343	do	117	Of 2	L	1.69
14346	J. P. Hilton, trustee	528	Of S. 12	Fourth	1.15
14348	Ann C. Tiegler	516	Of 28	Fourth	.30
14355	S. H. Sherwood	398	Of S. 10	Ninth	.07
14369	Eugene P. Warren	73	16	L	5.20
14370	R. C. Schenck and R. C. Schenck, jr	135	1	M	.18
14381	Alfred G. Haley	306	S. 2	Eleventh	1.72
14382	Matilda Taylor	333	S. 15	Eleventh	.14
14384	J. M. Latta	136	3	Connecticut	.38
14386	W. D. C. Murdock	90	7	Connecticut	1.80
14423	Ellen T. Cowen	247	M	L	.79
14450	Lloyd P. Pumphrey	193	S. 86	Fifteenth	4.93
14456	F. H. Morgan	364	Of 15	Ninth	7.67
14500	Washington Whittler	182	51	Sixteenth	1.75
14508	John J. Freeman, *et al*	449	Of 6	L	5.89
14560	Catherine McDonough	107	Of 7	K	2.79
14564	Mary Cratley	N. 508	S. 4	Rhode Island	4.51
14587	Charles W. Patterson	Res. D	Of 10	Maryland	.70
14589	C. L. and J. D. Ketchum	248	Of 8	K	.19
14592	George W. Drew	248	Of 8	K	1.10
14599	Fannie Smith	163	Of 7	K	3.07
14606	W. Valentine	163	Of 9	K	1.90
14608	James Anderson and S. Bond	163	Of 8	K	8.60
14609	Mary Ann Mathews	199	Of S. 13	K	.60
14610	do	199	Of S. 12	K	5.14
14612	H. V. Bryington	184	1	K	11.72
14625	William M. Corcoran	364	S. 126	R	2.55
14640	Samuel L. Bryan	159	S. 30	Rhode Island	15.46
14663	Margaret Lenox	380	Of 5	Tenth	3.03
14678	Elizabeth A. Savoy	158	Of 4	N	1.31
14679	William M. Corcoran	364	S. 125	R	2.27
14692	Dennis Barrett	419	Of 7	Eighth	.52
14700	Isaac D. Kitch	694	S. A	New Jersey	8.21
14702	William Easbey	691	12	New Jersey	18.41
14709	Annie Wilson	381	Of 5	Tenth	.12
14734	James Lewis	183	S. C	Sixteenth	1.13
14735	John Donovan	183	S. 25	Sixteenth	5.11
14738	C. Donovan	184	Of S. 18	Sixteenth	.82
14739	S. B. Perkins	184	Of S. 20	Sixteenth	5.63
14773	John Connally, *et al*	182	52	Sixteenth	4.26
14794	George M. Hickmann	525	Of 1	L	6.66
14795	B. Harton	182	62	Sixteenth	6.72
14796	H. B. Owen	383	Part of sq	B	4.18
14801	J. G. Naylor	525	S. 21	Fourth	.07
14802	W. G. Parkhurst	525	Of 5	Fourth	.36
14804	James Coumas	556	Of S. 1	L	1.03
14806	J. G. Naylor	525	S. 22	Fourth	.07
14810	John B. Lord	518	S. 27	Fourth	.77
14815	do	518	S. 26	Fourth	.64
14818	James Green	183	Of S. 48	Sixteenth	3.25
14823	J. C. Chavis	183	24	Sixteenth	18.02
14839	Edward Spedden	369	Of 2	L	1.55
14843	G. C. G. Sauer	530	Of 6	Fourth	.24
14847	John H. McCutchen	426	Of 8	L	4.51
14852	Albert Boulden	526	Of 8	L	3.96
14853	W. H. Pearson	515	Of 21	L	1.85
14854	John B. Ward	532	Of 6	Fourth	.35
14855	C. P. Clarke	18	3	Pomeroy	15.97
14861	Henry Waters			Hamilton road	1.29
14863	J. F. Cooke		Of 13	Linnean Hill road	11.15
14869	Charles J. Diggs		S. 23	Section 2, Stanton	2.35
14872	Horace W. Dungan	Blk. 7	10	Sumner	2.35
14873	Walter S. Eaton	Blk. 7	9	Sumner	2.35
14878	J. L. Barber		4	Lincoln	11.53
14885	Mary Hall			Hamilton road	.56
14886	Helen Batson			Hamilton road	.94
14887	Leonard Frost			Hamilton road	7.10
14889	John L. Wiggins		62	Sumner	1.75
14891	Helen Batson			Hamilton road	.86
14906	John B. Kidwell	217	S. 17	L	1.99
14907	John L. Kidwell	217	S. 18	L	1.55
14908	do	217	S. 19	L	7.83
14911	James Daley	283	10	L	1.77
14925	Edward Edwards, trustee	163	Of S. 21	L	4.31

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
14930	Albert Thomas	Blk. 16	12	College road	$3.61
14931	Henry McGoing	.....	.....	Bowen road	.62
14932	Joseph Frank	.....	.....	Brentwood road	.34
14934	Moses Kelley, trustee	247	I	Massachusetts	4.37
14935	....do	247	Of 4	Massachusetts	1.38
14960	Margaret Minor	288	Of 15	H	19.78
14974	A. Cohen	539	Of 13	Four-and-a-half	2.27
14980	Rufus L. B. Clark	690	Of S. 6	New Jersey	1.29
14983	Adam Dade	117	Of 13	Twentieth	5.17
14988	Charles H. Fishbaugh	211	L	Fourteenth	.03
14994	Sophia M. White	345	Of 12	Tenth	2.86
15000	Charles H. Fishbaugh	211	O	Fourteenth	.03
15001	....do	211	N	Fourteenth	.03
15002	....do	211	M	Fourteenth	.03
15023	Henry D. Burr	100	Of 27	Twentieth	.20
15024	John Cherry	104	Of 1	Twentieth	.19
15034	Levi W. Kimball	242	S. f	Fourteenth	.04
15063	Joseph Follansbee	571	Of S. 41	First	.02
15082	Mary Ann Gibbons	252	S. 1	Thirteenth	1.99
15141	James Abbott	252	Of 1	Thirteenth	7.79
15175	Cornelia V. Godey	238	S. 38	Fourteenth	.03
15176	....do	283	S. 37	Fourteenth	.02
15186	W. H. Martin	368	Of 12	Tenth	4.70
15198	Joseph Follansbee	571	S. 42	First	.05
15209	William H. Ward	487	Of 7	G	13.39
15231	C. Ingle and M. E. Hill	518	Of S. 5	G	.42
15240	Sanford Bilyea	567	Of 13	G	2.90
15243	C. Ingle and M. E. Hill	518	Of S. 6	G	.24
15293	S. P. Waite	455	18	G	14.42
15298	D. A. Straker	.....	.....	Seventh street road	2.63
15305	John Walter	347	Of 3	E	1.27
15306	Julia A. Van Ness	348	Of 12	E	1.76
15307	John M. Johnson	378	L	E	2.70
15317	Frederick Snyder's heirs	.....	.....	Seventh street road	3.38
15322	Jane D. Jackson	.....	.....	Seventh street road	3.65
15339	Susan C. Nicholson	399	Of S. 26	Eighth	3.80
15342	Noah H. Swayne	290	Of 4	E	4.78
15359	John M. Gattrell	400	S. 31	Eighth	3.62
15365	John Nelson, jr	399	Of S. 20	Eighth	2.13
15366	....do	399	Of S. 19	Eighth	2.72
15369	Edward W. Down	426	Of 5	Eighth	4.51
15371	Joseph Fugitt	570	12	Second	8.99
15372	James R. McAllister	568	26	Second	4.67
15422	Charles Keenan	536	Of 6	Four-and-a-half	4.33
15425	Bartley Knopp	537	S. ½ of 17	Four-and-a-half	3.14
15450	R. K. Johnson	122	Of 4	Twentieth	7.62
15451	Michael Welch	502	23	Sixth	10.59
15466	Alex. Speir	369	Of 20	Ninth	1.58
15490	Rose M. Kleiber	403	Of 4	Ninth	2.97
15517	Elon Boorehead	404	Of 4	Ninth	2.58
15521	Jery L. Page	401	Of 8	Ninth	2.63
15523	John B. Harrison *et al*	402	Of 4	Ninth	3.69
15529	J. B. Oliver	401	Of 8	Ninth	3.22
15530	A. Jackson	401	Of 4	Ninth	2.68
15535	T. J. Robinson	401	Of 5	Ninth	2.01
15554	V. E. King	378	Of 25	Ninth	3.30
15572	Jacob Lyons	377	Of 20	Ninth	7.48
15573	..... do	377	Of 21	Ninth	7.48
15574	Adam Schriver	377	Of 22	Ninth	2.49
15579	Catharine M. Johnson	376	D	Ninth	2.61
15616	G. A. Sandford	405	Of 6	Ninth	3.82
15618	H. W. Wurdeman	405	Of 5	Ninth	2.58
15619	A. R. Sheppard	405	Of 5	Ninth	2.58
15620	....do	405	Of 4	Ninth	3.82
15626	Morgan Donohoo	407	Of 6	Ninth	1.61
15635	Thomas Cookendorfer	408	C	Ninth	3.13
15641	Harriet Williamson	368	8	Tenth	.72
15642	Martin K. Walsh	340	Of S. 23	Tenth	4.16
15654	James Shugrue	134	S. 21	Nineteenth	.94
15720	Caroline Davis	629	Of S. 3	First	1.31
15723	Maria V. Brown	374	A	Tenth	8.44
15732	Richard Bowman	85	11	Twentieth	.68
15737	John Poor	75	Of 10	Twenty-second	.26
15745	Francis A. McCormick	693	Of 9	South Capitol	4.78
15809	D. Nailor	234	S. 20	Fourteenth	.03
15810	....do	234	S. 19	Fourteenth	.03
15811	....do	234	S. 24	Fourteenth	.03
15812	....do	234	S. 25	Fourteenth	.03

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
15826	Benjamin Owen	728	26	A	$10.65
15843	James H. Jackson	197	S. 33	Sixteenth	4.93
15844	James Lewis	197	S. 34	Sixteenth	3.48
15848	Jacob E. Lyon	349	Of 1	Tenth	5.22
15849	Mary Ann Harvey	349	S. A	Tenth	.16
15850	John Hitz, trustee	349	S. E	Tenth	.10
15862	L. S. Woodward, trustee	345	Of 12	Tenth	2.23
15863	Henry Turner	345	Of 13	Tenth	1.45
15867	Francis J. McNally	421	Of S. 17	Eighth	3.77
15879	Z. D. Gilman	369	S. 52	Tenth	3.59
15891	Thomas Gardner	206	113	Pierce Place	.62
15892	Edwin Potbury	206	116	Pierce Place	.26
15912	John Wilson	343	6	K	14.10
15914	Henry Messer	538	Of 18	E	1.64
15915	Emma Tucker	905	Part	I	7.94
15916	R. S. Collins, trustee, William M. Cross	494	Of 1	E	1.53
15932	Thomas E. Waggaman	675	S. 141	Myrtle	13.20
15934	Morris Scholosser	675	S. 139	Myrtle	13.20
15937	Fannie L. Moetzer	88	Of 100	Beall	.75
15941	George F. Gulick	941	Of 6	Ninth	1.80
15944	Henry Johnson	499	Of 13	Sixth	4.40
15946	....do	499	Of 14	Sixth	4.08
15947	A. Provost, trustee	292	Of 4	Thirteenth	3.50
15949	Richard Holmes, sr	594	Of S. 1	Third	1.34
15950	....do	594	Of S. K	Third	2.16
15954	John Buckley	540	Of S. 47	G	1.19
15961	James H. King	48	Of 14	Prospect	.11
15973	John McCarthy	470	4	K	4.99
15987	Israel B. Thompson	344	Of S. 11	Tenth	10.75
16036	W. W. McNeir, heirs	70	Of 128	Dunbarton	3.01
16042	John T. Norris	65	Of 141	Dunbarton	.11
16051	A. Robb	539	Of 11	Four-and-half	.74
16058	James McIntosh	630	Of 3	New Jersey	1.07
16060	Susan G. Nicholson	399	Of S. 27	Eighth	3.78
16061	Marianna B. Lathrop	284	12	Thirteenth	37.85
16064	Mary M. Manning	569	S. 45	Second	3.05
16067	Mary A. Dyer	.....	132	Dunbarton	8.91
16082	John Walter	293	Of 11	Thirteenth	9.91
16097	Edwin Stewart	288	Of 17	H	4.96
16099	Margaret Minor	288	Of 15	H	6.04
16103	Elizabeth A. Byington	469	33	Sixth	7.01
16136	David Edes and C. Bodisco	.....	Of 147	Green	.16
16150	Samuel Steinmetz	532	Of 9	E	.26
16151	G. P. Page	532	Of 9	E	1.93
16157	John J. Luckett	497	Of 10	Sixth	1.99
16162	Alex. R. Shepherd	575	E	Second	28.85
16199	James G. Naylor	N. 515	S. 33	New York	.50
16200	....do	N. 515	S. 36	New York	2.27
16202	Isaac Dorsey	514	Of 8	New York	.41
16203	George W. Rothwell	206	65	Pierce Place	2.26
16223	Ann E. McLaughlin	450	S. 21	Seventh	1.15
16225	James F. Caden	450	S. 19	Seventh	.26
16233	Isaac Rosenthal	485	S. 27	Fifth	1.05
16236	F. and W. H. Brooks	369	S. 13	Fifth	.78
16240	John Murphy	369	6	Tenth	1.89
16244	Charles Drain	372	Of 13	Tenth	.12
16245	....do	372	Of 14	Tenth	.12
16263	Caroline Rasher	425	Of S. 22	Seventh	.92
16265	Mary E. Shelly	447	S. 9	Seventh	.24
16282	Alex. R. Shepherd	164	S. 20	Seventeenth	.43
16292	Mary Hessler	492	A	Four-and-a-half	32.30
16316	John Heil	539	Of 13	Four-and-a-half	1.72
16333	Caleb Cushing	500	S. 46	Four-and-a-half	6.13
16348	James McManus	122	Of 5	Twentieth	.12
16376	Charles Kimmer	454	Of 12	Seventh	.17
16379	Elon Boorehead	404	Of 4	Ninth	5.98
16388	William B. Todd, jr	117	Of 30	Nineteenth	2.08
16399	Ann Kedghee	86	18	Nineteenth	1.75
16417	Susan Baltzer	319	1	G	1.47
16441	Henry Smith	99	S. 13	Twentieth	7.84
16445	John Farrell	117	Of 8	Twentieth	6.58
16453	John B. Turton	3	Of 82, 83	Water	10.87
16478	George W. Riggs and G. H. Plant	208	S. 102	Fourteenth	.03
16489	T. W. Soran	375	S. 101	G	1.42
16492	Jacob C. Miller	204	S. 36	Fourteenth	.01
16540	Isabella Kable	166	S. 19	Seventeenth	.45
16543	John P. Ingle	166	Of 1	Seventeenth	4.59
16549	Herman Blair	223	Of 1	G	5.14

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
16555	Johnson Hellen	223	Of 1	G	$17.02
16564	John Cook	289	Of 17	G	.86
16577	William H. Phillips	126	Of 31	Seventeenth	1.98
16587	John L. Kidwell	289	S. 32	Thirteenth	.44
16590	J. C. Kennedy, jr	285	Of 13	Thirteenth	.54
16596	Benjamin Reiss	224	Of 13	G	3.17
16597	Joseph Abbott	252	Of 1	G	39.88
16599	Margaret Kelly	293	Of 7	Thirteenth	.23
16605	Margaret Stewart	405	Of 2	G	2.10
16622	J. L. Roberts	340	Of 10	Eleventh	4.87
16631	T. T. Fowler and J. Hettinger	390	S. 15, 16	H	44.20
16662	Mary E. Pritchard	623	S. 96	Defrees	1.57
16663	Andrew Grogan	623	S. 95	Defrees	1.57
16665	Patrick McManus	623	S. 111	Defrees	13.73
16669	Sarah A. Stone	623	S. 81	Defrees	12.91
16670	Ives B. Howe	623	S. 76	Defrees	1.57
16675	Charles White *et al.*	623	S. 68	Defrees	1.57
16678	James M. Davidson	623	S. 91	Defrees	1.57
16679	Daniel W. Smith	623	S. 92	Defrees	1.57
16681	Harriet M. Tastel	623	S. 58	Defrees	13.73
16682	C. B. Calvert	623	S. 57	Defrees	1.57
16683	Mathew C. Baxter	623	S. 56	Defrees	1.57
16684	William B. Evans, trustee	623	S. 55	Defrees	1.57
16686	Nathan Evans	623	S. 53	Defrees	1.58
16687	Charles Herman	623	S. 50	Defrees	1.57
16690	Lewis E. Walker	623	S. 106	Defrees	1.57
16693	Joseph H. Hollidge	510	S. 71	Franklin	16.72
16694	Mathew Morton	510	S. 75	Franklin	17.27
16698	Thomas J. Mattingly	623	S. 109	Defrees	13.74
16704	Richard C. Gill	306	S. 21	S	3.36
16705	Joseph Lackey	306	S. 26	S	3.37
16707	William W. Dean	306	S. 30	S	3.37
16714	James Taylor	238	Of 1	S	5.08
16717	Mary Cratley	N. 508	S. 4	S	5.76
16749	T. and W. H. Brooks	408	S. 13	Fifth	12.99
16751	Henry M. Baker	206	12	S	2.04
16785	Sarah Gibson	313	Of 2	Twelfth	3.89
16788	John T. Wineberger	313	Of 3	Twelfth	5.34
16790	George Lyles	313	Of S. D	Twelfth	.73
16791	George Lyles	313	S. E	Twelfth	3.15
16792	Henry Hopp	313	Of 5	Twelfth	4.86
16804	James W. Patterson	732	S. 23	Carroll	4.65
16805	Edward V. Freyholde	732	S. D	Duddington Place	.54
16806	Dominica Christophani	732	S. A	Duddington Place	.54
16807	Henry McIntire	334	Of S. 4	S	2.62
16815	do	334	Of S. 5	S	.38
16816	Edwin A. McIntire	334	S. 2	S	3.39
16817	do	334	S. 3	S	3.38
16818	do	334	Of S. 4	S	.75
16823	Sidney F. Austin	334	Of S. 5	S	3.00
16834	Henry Caspari	516	Of 1	I	1.95
16835	Iradella Raub	516	Of 2	I	3.01
16836	Thomas Sullivan	516	Of 3	I	2.49
16837	George Miller	516	Of 5	I	2.99
16838	John E. Weys	516	Of 8	I	2.26
16839	John T. Wineberger	S. 516	Of 18	I	2.98
16840	Benjamin Saloman	S. 516	Of 14	I	2.39
16841	Thomas J. Triplett	S. 516	Of 13	I	2.46
16853	Michael and Bryan Green	276	S. 15	Twelfth	17.66
16854	do	278	S. 14	Twelfth	9.26
16856	Robert H. Spindle	365	Of S. 95	Alley	.59
16862	Leonard B. Prather	516	Of 6	I	3.30
16863	do	516	Of 5	I	2.99
16864	J. Johnson (of Beyant)	516	Of 7	I	3.99
16874	Richard Jackson	494	Of S. D	School	1.51
16875	Harrison Arnold	516	Of 3	I	2.05
16876	John Gerlack	878	Of 42	Seventh	.62
16879	Charles Meyer's heirs	73	Of 7	Dunbarton	5.45
16885	Frank Renshaw	62	Of 3	Dunbarton	6.82
16891	Lewis F. Barber	494	S. L	School	1.51
16892	do	494	S. K	School	1.51
16893	Nathan T. Ginlay	17	Of 16	Twenty-fifth	1.03
16897	Daniel W. Middleton	732	S. 3	C	19.69
16899	Chauncey Hickox	623	S. B	North Capitol	16.78
16906	Matilda Jacobi *et al*	455	Of 12	Seventh	10.05
16909	George Smithson	874	Of S. N	D	1.80
16910	do	874	S. O	D	3.63
16911	Hiram B. Leonard	874	S. Q	D	11.01

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
16912	Hiram B. Leonard	874	S. P	D	$3.63
16920	Jemima P. Ball	513	Of 27	Fourth	.22
16923	Augustus Davis	513	Of 27	Fourth	.24
16924	Henry B. Philbrook	513	Of 27	Fourth	.06
16926	Henry Munn	757	S. C	Second	.19
16927	....do	757	S. B	Second	.20
16928	....do	757	S. A	Second	.39
16931	Susan S. and Ellen C. Dangerfield	725	1	Second	3.79
16932	....do	725	32	Second	10.91
16933	Jennie M. Nichols	725	S. B	Second	4.54
16934	G. F. Wassman	725	S. G	Second	1.84
16935	Henry C. Lee	725	S. F	Second	1.55
16936	Henry E. Marks, trustees M. A. Hamilton.	869	Of 8	A	4.26
16937	Mary W. Aiken	869	Of 8	A	4.24
16938	Harvey J. Norton	842	Of 10	A	13.41
16951	William Gibson	628	S. 7	F	1.71
16952	Moses Kelly	628	S. 79	F	1.71
16956	William H. Anderson	518	Of S. 25	Washington	3.92
16957	Winney Thompson	518	Of 2	Washington	2.77
16958	Rudolph Buckley	518	Of 6	Washington	6.27
16962	Orville Drown	510	S. 20	Fifth	3.11
16965	Edward H. Courtenay	60	S. 16	E	.51
16966	Daniel F. Eichaltz, trustee	477	Of 9	Fifth	21.48
16968	John D. W. Moore	S. 277	S. 1	Thirteenth	12.15
16975	Turner Torey	762	Of 2	C	3.01
16980	Thomas H. Quincy	510	S. 29	Fifth	10.28
16981	John S. Blanckman	761	S. 20	B	7.40
16982	....do	761	S. 19	B	7.40
16994	William H. Holldige	510	S. 122	Fifth	2.91
17001	Isaac L. Johnson	589	9	Third	5.38
17002	William B. Todd, jr	587	Of 11	Third	13.49
17003	Seth J. Todd	587	Of 11	Third	13.49
17015	Harrington Putnam	206	S. 164	T	8.53
17027	Sampson D. Talbot	152	S. 68	T	11.68
17030	Frederick B. Smith	132	S. 79	T	13.11
17032	R. W. D. Bryan	131	S. 51	T	14.31
17036	Charles H. Knowlton	205	Of 4	T	12.14
17041	William H. Cook	877	Of 27	Seventh	1.91
17042	William H. Johnson	877	Of 34	Seventh	2.37
17043	Joseph Burroughs	877	Of 29	Seventh	1.90
17044	Joseph Trimble	905	Part	Seventh	2.69
17045	George W. Street	902	Of 4	Seventh	4.27
17046	Jane Moss	903	Of S. Q. 6	Seventh	.99
17050	Samuel Brown	Prather'ssub.	156	Eighth	4.65
17051	Isabella M. Ashford	912	S. 10	Eighth	6.25
17054	Joshua Ritchie	896	Of 8	Eighth	18.85
17055	Virginia M. Davis	904	Of 7	Seventh	1.47
17073	Isabella W. Ashford	912	S. 9	Eighth	6.25
17087	John B. Boone	347	Of 15	Tenth	29.59
17090	Dwight R. Waters	516	Of 8	I	2.26
17108	Alfred Marshall	870	Of 19	A	13.77
17113	Abner B. Kelly	628	87	F	1.72
17114	Almira Thompson	725	S. H	Second	1.55
17121	Mary Shannon	724	Of 24	Second	.58
17126	James W. Lambert	523	Of S. H	Fourth	.20
17127	Edward H. Courtenay	60	S. 15	E	.35
17128	....do	60	S. 14	E	.34
17130	Martha E. Boreland	511	S. 70	Fifth	.94
17172	Samuel Dohnea	102	Of 4	G	4.27
17184	....do	102	Of 3	G	4.62
17203	V. E. King	378	Of 25	Ninth	1.60
17207	Jacob Lyons	377	20	Ninth	27.23
17208	....do	377	21	Ninth	27.23
17242	R. J. Beall	374	Of 19	Ninth	.67
17247	Louise B. Schreiner	180	S. 66	Samson	22.25
17248	....do	180	S. 67	Samson	22.25
17255	Francis Howard	209	S. 52	Samson	21.49
17262	A. J. Joyce	209	Of S. 37	Samson	9.99
17280	Matilda Robinson	499	Of 3	Alley	2.39
17281	Thomas Neale	499	16	Alley	3.61
17282	Charles A. Wells, trustee	499	17	Alley	9.93
17284	John Ossinger	480	Of 4	Alley	.22
17285	John Wagner	480	Of 16	Alley	.06
17286	C. F. Fender	480	Of 6	Alley	.20
17287	John Ossinger	480	Of 3	Alley	.06
17289	J. L. Smith	325	Of 5	Twelfth	2.14

APPENDIX I.—*Statement of drawback certificates awaiting issue*—Continued.

Number of certificate.	To whom assessed.	Square.	Lot.	Street or avenue.	Amount.
17290	J. L. Smith	325	Of 5	Twelfth	$6.75
17291	Francis Pleasants	367	D	Alley	4.04
17292	John R. Wright	367	S. 29	Alley	4.41
17293	William G. Metzerott	367	S. 39	Alley	4.41
17304	Thomas Weaver	207	S. 62	Alley	2.71
17306	Elizabeth M. Sheldon	368	S. 21	Alley	2.91
17310	Gilbert C. Walker	103	17	Alley	5.25
17311	do	103	18	Alley	5.41
17314	Susan C. Zevely	375	S. 81	Alley	5.19
17315	Charles R. Thomas	375	S. 164	Alley	5.11
17317	John M. Brodhead	465	S. 52	Alley	.97
17318	Thomas Dixon	465	Of S. 51	Alley	.73
17320	Benj. Fugitt, trustee of C. Clark	465	Of S. 60	Alley	.52
17321	Sarah A. Gregory	465	Of S. 60	Alley	.52
17325	Benjamin King	279	S. 10	Alley	9.64
17330	Charles Siousa	121	S. C.	Alley	.95
17332	Mary Kraft	424	Of 15	Alley	5.88
17337	John B. Bloss	365	S. 128	Alley	.72
17338	Chase Roys, trustee, L. P. H. Rogers	365	S. 93	Alley	5.23
17340	Robert H. Spindle	365	Of S. 96	Alley	4.37
17351	Henry Ellenbrook	492	Of 3	Alley	2.44
17353	Samuel King	492	S. 101	Alley	1.74
17359	Elizabeth B. Kendall	492	S. Q.	Alley	2.64
17374	George E. Moore	N. 515	Of 4	Alley	17.79
17375	John Wise	624	Of 73	Alley	2.84
17376	do	624	Of 72	Alley	2.84
17377	do	624	S. F	Alley	2.93
17432	Horace Capron	245	S. 10	Alley	23.42
17433	J. B. Blake, trustee, Margaret A. Blake.	245	S. 9	Alley	18.77
17437	Josephine C. Bacon	495	1	F	16.10
17439	George R. Hall	163	31	Conecticut	.74
17445	John P. Idt	113	25	Conecticut	4.56
17446	do	113	25	(Circle) Connecticut	5.32
17452	E. H. Gray	375	80	Grant	10.05
17453	William F. Nelson	375	77	Grant	10.06
17464	F. W. Hayden	375	66	Grant	11.07
17465	E. D. Woodruff, trustee	375	67	Grant	11.07
17467	J. E. Rankin	375	83	Grant	10.34
17468	John R. Goodwin	375	Of 68	Grant	.20
17469	do	375	69	Grant	10.06
17480	Susan C. Zevely	375	81	Grant	11.07
17488	B. F. Moxley	166	7	Pennsylvania	4.11
17497	Patrick Daily	775	S. 15	K	1.59
17502	Bladen Dulaney	118	Of 2	Pennsylvania	2.65
17504	Zalmon Richards	240	27	Corcoran	4.39
17505	do	240	28	Corcoran	4.39
17506	do	240	29	Corcoran	4.39
	Total				9,749.34

APPENDIX II.—*Statement of drawback certificates awaiting satisfactory evidence before issue under act approved February 12, 1859.*

Number of certificate.	Property assessed to—	Square.	Lot.	Amount.
24001	W. S. Huntington, cashier	722	1	$244.60
24003	Jesse D. Bright	138	2, 3, 4	1,550.93
24034	Joseph B. Stewart	285	19	150.25
24041	Lewis Statland	285	A	111.70
24045	Robert A. Lacy	78	Of 1	13.12
24046	Alexander J. Perry	78	Of 1	13.69
24049	George Bender	78	A	32.43
24050	do	78	B	71.21
24051	Charles J. Wilson	86	1	31.20
24052	Thomas Monroe	86	2	51.04
24053	N. P. Harrison	86	Of 3	40.21
24055	W. T. Wilson, executor	86	Of 5	10.41
24056	do	86	Of 5	5.88
24057	do	86	Of 5	6.57

APPENDIX II.—*Statement of drawback certificates awaiting satisfactory evidence before issue under act approved February 12, 1880*—Continued.

Number of certificate.	Property assessed to—	Square.	Lot.	Amount.
24058	W. T. Wilson, executor	86	Of 5	$24.83
24059	Richard Thompson	86	Of 5	10.33
24061	George J. Johnson	86	Of 6	17.26
24062	Robert Earle	101	16	27.27
24063	do	101	17	35.08
24064	W. W. Herbert, trustee	101	18	104.19
24065	Joseph F. Brown	101	19	73.78
24082	Owen Murray	101	24	9.17
24083	do	101	24	9.96
24084	do	101	24	26.05
24086	H. K. Randall	101	Of 19	50.28
24087	George J. Johnson	118	7	50.40
24088	do	118	Of 8	17.77
24095	George S. Parker	102	Of E and F	16.66
24097	William J. Williams	120	W of 11	23.76
24098	M. K. Lenthall	121	Of 9	26.22
24102	John Frazier	127	Of 16	12.40
24103	Mary S. Dodge	127	Of 16	16.16
24112	J. W. Clarke	142	Of 7	4.23
24113	do	142	Of 7	4.46
24114	do	142	Of 7	10.06
24120	Thomas Smith	105	Of 11	5.60
24121	do	105	12	14.96
24122	do	105	14	14.96
24123	do	105	15	8.59
24124	do	105	16	6.97
24125	do	105	17	10.02
24126	do	105	18	15.40
24127	do	105	19	21.02
24128	do	105	Of 11	18.63
24129	do	105	12	49.73
24130	do	105	14	49.73
24131	do	105	15	28.58
24132	do	105	16	23.11
24133	do	105	17	33.27
24134	do	105	18	59.92
24135	do	105	19	81.77
24136	Cornelia P. Randolph *et al*	105	Of 20	6.01
24137	do	105	Of 20	20.10
24138	do	105	21	70.33
24139	H. K. Craig	105	22	19.24
24140	do	105	22	20.85
24141	do	105	22	22.34
24142	do	105	22	23.43
24143	George T. McGlue	105	23	16.63
24147	Richard Joyce	105	Of 24	.72
24148	do	105	Of 26	6.50
24149	do	105	Of 27	1.26
24150	do	105	Of 24	.78
24151	do	105	Of 26	7.15
24152	do	105	Of 27	1.40
24153	do	105	Of 24	.85
24154	do	105	Of 26	7.92
24155	do	105	Of 27	1.54
24156	do	105	Of 24	1.96
24157	do	105	Of 26	17.55
24158	do	105	Of 27	3.42
24162	Ann Joyce	105	Of 27	23.33
24171	Elizabeth H. Travers	105	Of 30	9.15
24172	do	105	Of 30	11.62
24178	Sarah Otterback	141	Of 19	90.13
24184	George J. Johnson	101	Of 27	39.84
24189	Thomas Carberry	106	Of 2	28.55
24190	do	106	Of 2	3.83
24191	Virginia Russell	106	3	77.65
24194	H. Pomeroy Brewster, trustee	106	Of 8	16.35
24195	do	106	Of 8	17.39
24200	Wm. J. Stone, jr., trustee	118	Of 12	62.61
24201	S. C. Smoot	118	Of 12	16.60
24203	A. Favier	119	Of 2	7.70
24205	Bladen Forrest	119	4	103.63
24219	John H. King	15	12	96.11
24220	John Payne	15	13	132.93
24221	Thomas Hammond	15	14	180.67
24225	Virginia Handy	15	Of 16	17.01
24226	Walter Stewart	15	Of 16	4.32
24227	do	15	Of 16	9.92
24228	do	15	Of 16	5.56

APPENDIX II.—*Statement of drawback certificates awaiting satisfactory evidence before issue under act approved February* 12, 1880—Continued.

Number of certificate.	Property assessed to—	Square.	Lot.	Amount.
24229	W. A. Fenwick and John A. Stewart	15	Of 16	$6.02
24230	....do	15	Of 16	26.52
24231	John R. P. Carpenter	15	Of 16	26.03
24235	R. P. Dunlap	27	11	83.93
24239	Owen McQuade	41	Of 5	4.03
24240	....do	41	Of 5	26.63
24241	John Morgan	42	1	98.99
24248	W. G. Ridgeley	42	7	143.30
24249	Nicholas Callan	42	Of 8	15.01
24250	....do	42	Of 8	54.43
24251	Harvey Fowler	42	Of 8	31.84
24258	Charles Stott	630	Of 4	63.54
24264	William Utermehle	152	20	262.38
24270	Allen C. Beaman	154	Of 11	6.13
24271	....do	154	Of 11	6.53
24272	George A. Armes	154	Of 11	144.70
24273	Israel Dillie	154	12	29.94
24274	....do	154	12	61.92
24275	....do	154	12	32.19
24276	Stephen H. Sherman and W. R. Wallace	154	13	92.39
24277	....do	154	13	43.07
24284	James A. Shaw	132	Of 3 and 4	10.86
24285	....do	132	Of 3	11.45
24286	....do	132	4	24.93
24290	John W. Starr	132	8	7.03
24291	....do	132	8	7.65
24292	....do	132	8	8.66
24293	....do	132	8	9.75
24294	....do	132	9	7.03
24295	....do	132	9	7.73
24296	....do	132	9	8.53
24297	....do	132	9	11.19
24298	....do	132	10	7.03
24299	....do	132	10	7.66
24300	....do	132	10	15.50
24301	J. W. Starr and W. W. Metcalf	132	11	7.03
24302	....do	132	11	7.66
24303	....do	132	11	16.73
24304	....do	132	12	7.33
24305	....do	132	12	8.03
24306	....do	132	12	16.94
23307	....do	132	13	7.33
24308	....do	132	13	24.18
24312	J. C. Willard	224	Of 1	21.97
24313	....do	224	Of 3	31.40
24314	T. Carberry and Dr. Ritchie, Georgetown	224	4	47.26
24315	Nicholas Callan	225	1	12.17
24316	....do	225	1	48.39
24319	A. J. Joyce	225	5	29.64
24321	A. Hyde, trustee	225	9	69.22
24322	J. C. and H. A. Willard	225	12 and 13	72.80
24326	Charles Kloman, trustee, A. Peterson	347	Of 14	5.23
24327	....do	347	Of 14	13.63
24328	....do	347	Of 14	7.30
24331	Mary E. St. Clair	347	Of 15	20.93
24332	G. F. Schaffer	347	Of 16	6.41
24333	G. F. Schaffer	347	Of 16	20.20
24334	Columbus Alexander	348	Of 17	28.93
24335	Joseph T. Brown	348	Of 17	11.20
24336	E. C. Dyer	348	Of 18	14.23
24337	E. N. Taft	348	Of 18	11.87
24338	Melinda Sears	209	Of 16	5.85
24339	W. Hill	209	Of 16	6.80
24340	W. B. Todd	209	Of 16 and 17	27.93
24341	C. D. Tennant	209	Of 48	4.81
24342	Peter Flynn	209	Of 48	4.53
24343	Patrick Ragan	209	Of 49	4.90
24344	J. J. Fowler	209	Of 49	3.67
24345	E. C. Carrington	209	50 and 51	22.65
24346	W. N. H. Mack	209	52	14.56
24347	Wm. B. Todd	209	53	26.60
24348	A. B. Howland and J. F. Fitzhugh	209	Of 54	5.16
24349	W. B. Todd	209	Of 54	5.07
24350	....Do	209	Of 54	2.24
24351	R. S. Maine	209	55	4.17
24352	P. A. Siberly	209	Of 56	4.49
24353	Andrew Glass	209	Of 56	3.12
24354	Jane D. Baldwin	209	Of 56	3.43

APPENDIX II.—*Statement of drawback certificates awating satisfactory evidence before issue under act approved February* 12, 1880—Continued.

Number of certificate.	Property assessed to—	Square.	Lot.	Amount.
24355	P. Ragan	209	Of 37 and 38	$15.91
24356	John Chapman	209	Of 39	6.84
24357	A. M. Dutch	209	Of 40	5.16
24358	R. Wilson	209	Of 40	5.16
24359	W. B. Todd	209	41 and 42	32.04
24360	Robert Bates	209	Of 43	5.32
24361	John Minor and J. D. McPherson	209	Of 43	5.91
24362	Patrick Ragan	209	Of 44	7.85
24363	A. H. Eichstadt	209	Of 44	3.67
24364	Peter Dunn	209	Of 44 and 45	3.41
24365	John S. Crocker	209	Of 45	4.15
24366	C. H. W. Stokeley	209	Of 45 and 46	6.68
24367	George Mason	209	Of 46	6.69
24368	Lucy Ann Sitgreaves	245	Of sub. 15	44.07
24369	Pierce Shoemaker	245	Of 13	55.75
24371	M. C. and J. Meigs, in trust	245	Sub. 16	39 45
24372	....do	245	Sub. 17	39.45
24373	....do	245	Sub. 18	39 45
24374	Joseph Williamson	245	Of 15	50.60
24380	Pierce Shoemaker	245	Of 16	17.78
24382	A. A. Greir	245	Of 16	5.05
24383	....do	245	Of 16	18 61
24385	L. Dovilliers and N. Carusi	281	A	11.58
24386	....do	281	A	51.91
24387	....do	281	B	11.21
24388	....do	281	B	43.68
24389	....do	281	C	52.09
24390	James M. Alden	281	D	10.76
24391	James M. Alden	281	D	34.39
24392	L. Dovilliers and N. Carusi	281	E	64.94
24400	Arnold Harris, trustee	281	8	73.59
24402	Margaret Adams	280	Of 5	34.52
24406	Thomas M. Vincent	280	Of 4	30.18
24409	Alfred Richards	280	Of 3	33.87
24410	William F. Crane	280	Of 3	34.67
24418	William Rutherford	281	21 and 22	23.83
24419	....do	281	21 and 22	26.57
24423	Thomas W. Miller	281	Of 11	100.27
24425	Michael Joyce	281	Of 11	25.95
24428	Harriet Williams	316	1	46.31
24429	M. M. Dyer	316	2	63.31
24430	George H. Turton	316	3	11.40
24439	Bryan Green	316	Of 5, 6	34.71
24441	Lucinda Moore	316	7	50.28
24442	J. M. Lovejoy, trustee	317	Of 8	33.75
24447	Ignatius Simms	317	Of 10	70.25
24448	A. Roth	317	Of 10	52.66
24449	Joseph B. Williamson	342	22	10.65
24450	....do	342	22	12.08
24451	....do	342	22	13.04
24452	....do	342	22	15.73
24461	Samuel Baker	343	Of 5	11.40
24462	....do	343	Of 5	42.29
24468	J. M. Downing	426	Of 8	12.16
24469	....do	426	Of 8	48.14
24470	Wm. B. Downing	426	Of 8	6.13
24471	....do	426	Of 8	22.49
24473	John W. Ray, trustee	448	11	39.22
24488	Jacob Kalb	448	21	37.53
24489	Ernest A. Knorr, trustee	448	Of 23	22.96
24494	Wm. J. Stone, trustee, Hughes	448	25	9.62
24495	....do	448	25	10.45
24496	....do	448	25	11.23
24497	....do	448	25	11.94
24506	James Smith	448	Of 8	5.13
24507	....do	448	Of 8	16.96
24509	John G. Adams	448	Of 31	17.04
24512	R. A. W. Radcliffe	448	Of 33	4.25
24513	....do	448	Of 33	4.71
24514	....do	448	Of 33	5.17
24515	....do	448	Of 33	5.57
24516	Dennis Barrett	448	Of 33	17.01
24520	James O'Hare	448	Of 35	4.31
24521	....do	448	Of 35	4.38
24522	....do	448	Of 35	8.83
24523	Thomas Brown	448	Of 35	38.76
24524	Moses Howland	448	Of 36	17.01
24526	John Laurie	448	37	34.01

APPENDIX II.—*Statement of drawback certificates awaiting satisfactory evidence before issue under act approved February 12, 1880*—Continued.

Number of certificate.	Property assessed to—	Square.	Lot.	Amount.
24531	John Wilson	343	Of 6	$14.19
24532	....do	343	Of 6	51.75
24535	William C. Goddard	343	Of 6	21.80
24536	....do	343	Of 6	23.31
24537	....do	343	Of 6	53.96
24540	John Elbert	343	Of 6 and 7	49.44
24541	Mary Bevan	343	Of 7	72.38
24542	Mary W. Stewart	343	Of 7	65.96
24544	I. L. Hartman	343	Of 1	12.23
24545	....do	343	Of 1	61.58
24546	Alex. R. Shepherd	372	Of 12	33.65
24547	Henry Custer	372	Of 12	63.23
24548	B. Ogle Tayloe	372	Of 13	44.48
24549	Charles Drain	372	Of 13 and 14	22.29
24550	....do	372	Of 13 and 14	23.51
24551	Charles Homiller	372	Of 14	33.10
24552	....do	372	Of 14	15.09
24553	Evan Evans	372	15	57.62
24559	William H. West	342	19	54.58
24566	Oliver H. Gilbert	371	L	91.70
24568	Edward McCarlin	682	A and G	60.24
24569	....do	682	A and G	62.54
24570	....do	682	A and G	65.51
24571	....do	682	A and G	74.65
24575	C. Y. Langtree	755	A	11.75
24576	....do	755	A	39.71
24580	J. A. Lavender	755	Of 5	12.03
24581	....do	755	Of 5	41.23
24582	A. R. Spofford	755	Of 5	47.33
24583	....do	755	Of 5	161.95
24594	John L. Weems	629	15	141.19
24597	Harriet Sage	629	11	16.30
24598	....do	629	11	17.89
24604	Joab Angus and Thomas Lewis	630	Of 3	679.01
24605	E. A. D. Wroe	630	Of 3	100.71
24608	Nicholas Acker	630	Of 3	165.01
24612	Charles Stott	630	Of 4	62.30
24613	....do	630	Of 4	221.67
24634	Samuel Miller	515	20	124.67
24635	John S. Crocker	515	Of 21	32.11
24640	Jonathan Hamilton	515	Of 22	21.53
24641	....do	515	Of 20	23.38
24646	William Ballauf	515	Of 23	46.50
24647	John K. Neff	515	Of 23	49.42
24648	William Mann	515	I	5.23
24649	....do	515	I	17.54
24651	William A. Farlee	515	L	4.97
24652	....do	515	L	5.65
24653	....do	515	L	12.24
24654	Eliza C. Johnson	515	Of 24	5.17
24655	....do	515	Of 24	21.08
24656	John W. Lewis	North of 515	Of 1 and 2	42.02
24663	John Caton, trustee, S. Edelin	515	Of 3	6.63
24664	....do	515	Of 3	7.03
24665	....do	515	Of 3	16.48
24666	James H. Smith	515	Of 3	26.58
24671	James Moore	515	6	229.11
24672	Mary Shugrue	763	13	96.50
24674	John Dwyer	763	15	107.30
24683	James Smillie	733	8	201.16
24684	P. M. Ellis	733	Of 7	35.73
24686	J. W. Rumsey	733	Of 5 and 6	44.64
24690	....do	733	Of 2 and 3	46.10
24691	Samuel Ker	733	Of 1 and 2	28.53
24692	J. H. Hill	733	Of 1	7.40
24693	....do	733	Of 1	29.63
24694	James Parker	733	Of 5	101.53
	Total			12,881.81

APPENDIX III.—*Statement of drawback certificates received for account of sinking fund by this division in accordance with orders of Commissioners of the District of Columbia dated April* 17, 1880, *and July* 1, 1880. *and transmitted to the auditor of the District of Columbia under order of Commissioners of the District of Columbia dated March* 8, 1881, *from June* 30, 1888, *to June* 30, 1889.

Date.	Amount.	Date.	Amount.
Aug. 22, 1888	$23.22	Mar. 12, 1889	$4.39
Oct. 9, 1888	.98	Mar. 21, 1889	68.54
Oct. 11, 1888	23.69	Mar. 29, 1889	76.73
Nov. 5, 1888	20.46	Apr. 8, 1889	165.98
Nov. 12, 1888	120.00	Apr. 18, 1889	4.39
Jan. 17, 1889	86.71	Apr. 23, 1889	24.75
Jan. 18, 1889	240.28	Apr. 25, 1889	27.84
Jan. 24, 1889	147.81	May 4, 1889	42.40
Jan. 29, 1889	82.26	May 10, 1889	23.36
Jan. 30, 1889	38.51	May 11, 1889	24.36
Feb. 5, 1889	24.18	May 16, 1889	30.91
Feb. 7, 1889	82.85	May 20, 1889	21.55
Feb. 8, 1889	80.15	May 24, 1889	52.70
Feb. 9, 1889	25.31	May 29, 1889	199.43
Feb. 13, 1889	68.57	June 18, 1889	62.39
Feb. 20, 1889	94.17	June 26, 1889	113.57
Feb. 23, 1889	64.60		
Mar. 7, 1889	83.87		2,250.91

APPENDIX IV.—*Statement of certificates not held by the commissioner of the sinking fund settled by surrender or by payment with interest.*

No. of certificate.	Date of payment.	Amount.	Interest.	To whom paid.
	1888.			
182	July 21	$171.80	.....	By surrender, H. S Johnson.
181	July 21	316.08	.....	Do.
2216	July 21	253.36	.....	Do.
2218	July 21	253.37	.....	Do.
341	July 26	84.69	.....	By surrender, H. B. Moulton.
674	July 28	836.55	.....	By surrender, attorney District of Columbia.
2207	Aug. 27	24.14	.....	By surrender. J. R. Hertford.
96 (county)	Aug. 29	22.89	.....	By surrender, Jacob Franz.
2364	Sept. 1	84.95	.....	By surrender, Wm. Yorke AtLee.
6062	Sept. 14	42.96	$64.38	By warrant to Jesse B. Wilson.
2708	Dec. 3	301.89	.....	By surrender by W. R. Riley.
2109	Dec. 3	301.89	.....	Do.
2110	Dec. 3	142.73	.....	Do.
2221	Dec. 15	464.90	.....	By surrender by John G. Slater.
	1889.			
802	Jan. 3	252.02	.....	By surrender by A. S. Pratt & Son.
803	Jan. 3	252.02	.....	Do.
1119	Jan. 3	158.48	.....	Do.
1120	Jan. 3	56.71	.....	Do.
2016	Jan. 3	80.00	.....	By surrender by Thos. E. Waggaman.
910	Feb. 21	161.39	.....	By surrender by Wm. Yorke AtLee, in settlement of purchase at sale.
6053	May 1	9.13	14.37	By warrant to Jesse B. Wilson.
1923	May 7	121.25	.....	By surrender by J. R. Riley.
1962	June 12	158.88	261.75	By warrant to Eliza V. Kliendienst.
1903	June 30	82.33	130.42	By warrant to U. S. Treasurer, *ex officio* commissioner of the sinking fund.
		4,643.41	470.92	
Add interest collected	.....	470.92		
Total	.....	5,114.33		

APPENDIX V.—*Statement of outstanding lien certificates issued by the late board of public works and not held by the commissioners of the sinking fund.*

Number of lien.	Amount.	Number of lien.	Amount.	Number of lien.	Amount.
5	$187.08	1538	107.37	2786	$351.60
50	37.35	1536	107.37	2813	74.28
51	130.72	1564	132.19	3017	98.33
177	89.58	1566	273.57	3033	53.34
200	177.16	1621	102.96	3057	73.34
206	396.03	1680	936.31	3094	1.39
347	399.11	1681	289.38	3194	226.03
534	86.22	1682	404.47	3296	200.00
602	26.72	1932	181.04	3378	7,068.00
624	40.93	1939	122.15	3379	4,103.30
693	384.39	1940	122.16	3380	716.80
703	105.57	2006	99.91	3381	11,842.60
833 (vel. 19977.)	358.02	2013	138.44	3382	7,577.60
838	172.32	2014	153.51	3383	2,894.50
839	665.58	2015	517.53	3384	444.80
914	131.42	2019	134.33	3385	7,362.00
990	109.42	2020	158.88	3386	1,052.80
991	222.34	2021	153.53	3407	601.54
1024	642.60	2026	139.15	3438	43.68
1114	89.03	2034	498.37	3439	9.69
1142	130.74	2041	117.22	3441	55.48
1148	148.70	2057	109.12	6038	94.25
1178	174.74	2103	285.44	6042	160.20
1179	123.20	2104	301.89	6043	52.98
1217	947.11	2105	285.44	6044	114.32
1377	231.41	2106	285.44	6056	9.14
1378	771.53	2107	285.44	6061	76.86
1514	224.20	2116	263.04	6085	1.35
1526	107.38	2117	290.82	19984	266.64
1527	107.37	2121	133.39		
1528	107.37	2122	133.39	COUNTY.	
1529	107.37	2225	13.95		
1530	107.37	2227	92.99	21	9.08
1531	107.37	2250	239.74	36	12.13
1533	107.37	2344	147.77	50	12.13
1534	107.37	2413	12.40	55	37.11
1535	107.37	2416	12.40		
1536	107.37	2666	116.40	Total	61,980.49
1537	107.37				

APPENDIX VI.—*Statement of amounts of outstanding lien certificates subject to redemption in drawback certificates upon presentation and demand.*

No. of lien.	Amount.	No. of lien.	Amount.	No. of lien.	Amount.
1681	$38.74	3388	$24.70	3390	$54.36
1682	54.13	3389	3.81		
3387	32.00				207.74

APPENDIX VII.—*Statement of lien certificates not held by the commissioner of the sinking fund outstanding, for amounts paid into court by property owners.*

No. of lien.	Amount.	No. of lien.	Amount.	No. of lien.	Amount.
484	$195.56	541	$43.01	616	$28.05
485	22.62	542	43.02	621	47.56
487	132.20	546	124.37	622	31.92
488	225.63	571	44.49	630	8.67
496	134.36	572	44.77	631	25.07
500	46.17	573	44.77	632	22.50
507	48.10	587	49.53	633	47.56
521	35.11	588	34.98	645	42.69
522	18.04	591	79.86	646	38.47
523	13.99	592	40.01	647	38.47
533	49.53	593	28.30	648	37.88
534	59.19	600	38.48		
535	22.19	602	42.74	Total	2,472.73
539	124.27	603	182.56		
540	92.31	609	43.73		

APPENDIX VIII.—*Compulsory permit assessments.*

No.	Square.	Work.	Location.	Amount assessed.	Entered of record.
53820	Res. C	Sewer	Alley	$169.51	Nov. 14, 1887
53965	126	Paving	Alley	20.67	Dec. 13, 1887
53968	160	Paving	Alley	47.75	Dec. 14, 1887
53969	242	Grading and paving	Alley	696.33	Dec. 23, 1887
53936	115	Grading and paving	Alley	296.34	Dec. 23, 1887
54009	202	Sidewalk	W street	311.58	Dec. 23, 1887
53963	126	Paving	Alley	22.67	Dec. 24, 1887
54021	422	Paving	Alley*	.....	Dec. 24, 1887
54012	180	Paving	Alley	179.32	Dec. 24, 1887
54013	574	Paving	Alley	113.62	Dec. 24, 1887
54030	620	Sidewalk, curb, and gutter	L street	219.20	Dec. 28, 1887
54246	Res. 10	Sidewalk	C street	20.00	Jan. 23, 1888
54253	206	Pavement and sewer	Alley	501.70	Jan. 23, 1888
54245	162	Pavement	Alley	556.85	Jan. 24, 1888
54248	1010	Sidewalk	B street	184.83	Jan. 24, 1888
54251	621	Sidewalk	L street	84.45	Jan. 24, 1888
54239	394	Sidewalk	T street	110.62	Jan. 24, 1888
54250	54	Sidewalk	Twenty-second street	18.00	Jan. 24, 1888
54249	620	Paving	Alley	124.12	Jan. 24, 1888
54244	857	Sidewalk	I street	285.43	Jan. 24, 1888
54237	181	Paving	Alley	468.31	Jan. 25, 1888
54272	557	Sewer and pavement	Alley	443.97	Jan. 28, 1888
54256	364	Sidewalk	Q street	47.78	Jan. 28, 1888
54423	583	Sewer and paving	Alley	803.58	Feb. 11, 1888
55627	126	Sewer	Alley	393.32	Mar. 7, 1888
55677	510	Sewer	Alley	262.46	Mar. 7, 1888
55676	181	Sewer	Alley	272.87	Mar. 10, 1888
55917	586	Paving and sewer	Alley	715.98	Mar. 14, 1888
55679	Res. 10	Sewer	Alley	124.64	Mar. 14, 1888
55712	869	Paving and sewer	Alley	1,168.90	Mar. 14, 1888
55636	877	Sewer	Alley	775.18	Mar. 14, 1888
56105	925	Sewer	Alley	154.37	Mar. 23, 1888
56673	368	Sewer	Alley	213.31	Apr. 4, 1888
54021	422	Paving	.....	152.28	Apr. 14, 1888
	422	Paving†	Alley	303.47	
56887	507	Sewer	Alley	148.93	Mar. 7, 1888
57384	100	Sewer	Alley	472.01	July 5, 1888
57392	753	Sewer	Alley	84.20	July 7, 1888
57630	676	Sewer	Alley	215.01	July 14, 1888
57385	313	Sewer	Alley	133.63	July 14, 1888
57634	544	Sewer	Alley	178.56	July 16, 1888
57635	501	Sewer	Alley	514.35	July 17, 1888
58064	925	Paving	Alley	339.33	July 20, 1888
58434	677	Sewer	Alley	205.09	July 27, 1888
58435	16	Sewer	Alley	409.74	July 27, 1888
58463	874	Paving	Alley	93.77	July 30, 1888
58661	759	Paving	Alley	68.68	Aug. 3, 1888
59857	344	Sidewalk	I street	13.38	Sept. 1, 1888
59863	240	Sidewalk	R street	10.10	Sept. 4, 1888
59854	878	Sewer and paving	Alleys	1,081.69	Sept. 18, 1888
59858	115	Sidewalk	Sunderland Place	8.08	Sept. 18, 1888
6181	241	Sidewalk	Kingman Place	4.24	Oct. 10, 1888
60271	193	Paving	Alley	710.49	Oct. 22, 1888
60270	383	Paving	Alley	192.45	Oct. 22, 1888
60272	193	Paving	Alley	470.42	Oct. 22, 1888
60273	383	Paving	Alley	1,013.95	Oct. 22, 1888
60348	193	Paving	Alley	47.72	Nov. 1, 1888
60382	181	Paving	Alley	706.17	Nov. 6, 1888
60381	815	Paving	Alley	203.21	Nov. 6, 1888
60383	239	Paving	Alley	927.18	Nov. 7, 1888
60384	139	Paving	Alley	883.88	Nov. 7, 1888
60400	100	Paving	Alley	1,888.21	Nov. 10, 1888
60664	551	Grading	Alley	105.40	Dec. 18, 1888
60887	440	Sidewalk	T street	59.15	Jan. 18, 1889
60876	271	Paving	East alley	911.09	Jan. 18, 1889
60884	271	Paving	West alley	743.64	Jan. 18, 1889
60924	67	Paving	Alley	423.50	Jan. 24, 1889
60917	213	Grading and paving	Alley	137.94	Jan. 24, 1889
60931	421	Paving	Alley	620.45	Jan. 26, 1889
60936	290	Paving	Alleys	697.26	Jan. 31, 1889
60937	545	Paving	Alley	203.27	Jan. 31, 1889
61157	429	Grading and paving	Alley	419.16	Feb. 11, 1889
61155	158	Paving	Alley	226.49	Feb. 13, 1889
61036	99	Sidewalk	Twentieth street	134.15	Feb. 15, 1889
61186	191	Paving	Alley	743.46	Feb. 15, 1889
61202	334	Sidewalk	Tenth street	40.66	Feb. 19, 1889
61218	726	Sidewalk	B street	16.15	Feb. 20, 1889
61199	191	Paving	Alley	428.27	Feb. 21, 1889

*See *infra* for corrected assessment.
†Property of Northern Market Company.

APPENDIX VIII.—*Compulsory permit assessments*—Continued.

No.	Square.	Work.	Location.	Amount assessed.	Entered of record.
61605	399	Sidewalk	O street	$129.77	Mar. 11, 1889
61645	716	Paving	Alley	234.42	Mar. 11, 1889
61656	495	Paving	Alley	753.33	Mar. 13, 1889
61680	140	Paving	Alley	388.36	Mar. 16, 1889
61682	221	Sidewalk	H street	28.73	Mar. 16, 1889
61681	457	Sidewalk	D street	259.03	Mar. 16, 1889
61686	868	Paving	Part of East alley	852.14	Mar. 27, 1889
61729	92	Curb gutter, and sidewalk	Twenty-first street	155.63	Mar. 27, 1889
61767	176	Sidewalk, curb, and gutter	Seventeenth street	72.48	Mar. 28, 1889
61685	868	Paving	West and North alleys	599.25	Mar. 29, 1889
61858	331	Paving	Alley	659.24	Mar. 30, 1889
61856	621	Paving	Alley	514.94	Apr. 1, 1889
61857	30	Sidewalk	Thirty-second street (High)	66.05	Apr. 2, 1889
61900	210	Paving	Alley	210.04	Apr. 2, 1889
61943	441	Paving	Alley	997.92	Apr. 10, 1889
61942	877	Paving	Alley	1,027.39	Apr. 10, 1889
61875	182	Paving	Alleys	1,358.63	Apr. 10, 1889
61920	426	Sidewalk	Seventh street	104.61	Apr. 10, 1889
61908	276	Paving	Alley	99.23	Apr. 10, 1889
61874	94	Sidewalk	Twenty-sixth street (North)	54.06	Apr. 10, 1889
61903	461	Paving	Alley	325.21	Apr. 10, 1889
61944	340	Sidewalk	Eleventh street	34.72	Apr. 10, 1889
62466	740	Paving	Alley	195.24	May 7, 1889
62881	260	Sidewalk	Thirteenth street	119.27	May 23, 1889
62884	131	Sidewalk	Boundary	97.59	May 23, 1889
62888	252	Paving	Alley	201.03	May 23, 1889
62887	564	Sidewalk	Second street	45.77	May 23, 1889
62889	436	Sidewalk	Seventh street	13.41	May 23, 1889
62890	436	Sidewalk	Seventh street	13.55	May 23, 1889
63049	South of 1019	Sidewalk	Twelfth street	93.31	June 7, 1889
63054	South of 1019	Sidewalk	G street	21.22	June 7, 1889
63083	69	Sidewalk	N street	72.45	June 14, 1889
63241	677	Sidewalk	H street	17.44	June 24, 1889
		Total		37,013.38	

APPENDIX IX.—*Statement of property sold for the satisfaction of unpaid special assessments, January* 22, 1889.

Square.	Lot.	Street or avenue.	Amount exclusive of interest.
131	30	Boundary	$45.48
580	Of 11	C	51.45
43	Of D	Virginia	25.27
847	Of 16	Sixth	30.71
183	Of 5	L	138.48
389	Of 6	G	73.24
414	Of 1	G	87.85
389	4	G	107.25
878	Of 2	I	32.69
462	34	Alley	8.92
462	34	B	121.88
462	35	Alley	8.92
462	35	B	128.82
594	44	M	27.92
365	Of 99	Alley	3.22
525	Of 7	Third	161.33
970	Of 5	C	2.75
389	Of 6	G	73.25
797	Of 1	Virginia	20.77
100	E	Alley	2.98
100	F	Alley	3.12
50	14	Twenty-third	38.00
890	24	Alley	5.59
790	Of 2	C	35.43
790	Of 2	C	36.34
762	28	Third	65.58
995	9	Eleventh	117.04
625	Of 8	Massachusetts	20.47
625	Of 8	Alley	6.75
56	Of 3	G	30.12
776	8	H	66.88
462	14	Maryland	113.50
562	Of 3	H	$57.59
353	Of 4	Eleventh	169.84
1040	1	C	29.48
223	Of 7	For costs	16.23
1060	Of 2	C	7.80
1060	Of 3	C	3.04
281	Of 21	N	146.31
569	25	First	373.88
131	20	T	64.91
68	Part	Monroe, Georgetown	11.75
		OLD CORPORATION SPECIAL ASSESSMENTS.	
1061	Of 11	Pump	$1.71
414	Of 1	Footway	20.81
1028	11	Pump	8.60
1061	27	Pump	2.54
833	12	Pump	.79
511	18	Footway	49.64
511	18	Paving alley	54.78
510	55	Footway	22.31
1061	29	Pump	2.54
797	Of I	Footway	57.09
762	28	Pump	3.27
1061	Of 14	Pump	2.72
281	Of 21	Sewer	46.32
			2,846.92

E.

REPORT OF THE ATTORNEY.

OFFICE OF THE ATTORNEY OF THE
DISTRICT OF COLUMBIA,
Washington, October 23, 1889.

GENTLEMEN: In submitting a brief review of the business of this office for the year ending June 30, 1889, I have again to report a noticeable increase in the labors of the office. During the year under consideration this increase has been principally in the advisory duties of the office, which, as I have heretofore reported, are every year becoming of more and more importance, and involve greatly increased demands upon the office force.

The business of the office in the courts was less exacting than during the preceding year, owing to the fact that by reason of the condition of the court calendars fewer opportunities for the trial and disposition of causes were had.

In the Supreme Court of the United States, where a number of District cases are still pending, but two causes were heard on their merits, namely, the cases of the Metropolitan Railroad Company against the District, and Brown against the District. The former case was begun by the District in the supreme court of the District, and had for its object the recovery from the railroad company of the amount expended by the District in paving the spaces between and adjacent to the tracks of the company, which, by law, it was the duty of the company to do. In the court below the District obtained a judgment for upwards of $147,000, and the railroad company sued out a writ of error. The cause was argued in the Supreme Court at the last term, and on the 21st instant that court rendered its decision, reversing the judgment below on the ground of error in the rulings on the question of limitations and directing the court below to enter judgment for the defendant. I have not had an opportunity to see the court's opinion, and have no knowledge of its language, except such as I have derived from the newspaper reports; but, if the court's judgment be as reported, it seems to me to put an end to the case, as well as to the similar cases against the Washington and Georgetown and Columbia railroad companies.

The work sued for in these cases was done by the District at various times from October, 1872, to January, 1874, except a very small part, which was not finished until July, 1875. Under the ruling of the Supreme Court, the actions by the District should have been brought within three years after the doing of the work. I came into office in November, 1877, too late, according to the court, to have saved the District's rights, except as to the work done in 1875, even had I immediately brought the suits. But in point of fact I was wholly unaware

of the claims against the companies until some time after taking office. The matter first came to my attention in the winter of 1878–'79, in connection with certain questions presented to me in relation to the revision of the special assessments on streets traversed by the roads. It was then too late to save the District's rights as to any of the work, if the statute of limitations should be held applicable.

The matter came to the attention of Congress, and the House Committee on the District called before it the presidents of the companies, and, although I was not present at the conference and was not invited and had no opportunity to be, I was informed that it was there agreed that statements of fact should be made up and submitted to the supreme court of the District for its decision as to the liability of the companies, it being further agreed that the question of limitations should be waived. After months of ineffectual efforts to procure the making up of the statements I caused statements of the cost of the work to be prepared and demand of payment made upon the companies. This I followed by bringing the suits, and I was met at the threshold by the plea of limitations.

As to this point the responsibility for the situation rests upon those in office before my connection with the District began. I think that, without regard to technical questions of law, the companies should in justice pay for the work in question, and I urge it upon you to bring the matter promptly and forcibly to the attention of Congress, which body, under its reserved rights as to alteration or repeal of their charters, can, if it sees fit, quickly bring the companies to terms.

The case of Brown against the District was a suit alleging the infringement by the District of three patents of Brown's for the construction of wood pavement for streets. The alleged infringement was committed by the board of public works during its operations in paving the streets of the city of Washington, and Brown sought an account and damages from the District. The suit was instituted in the supreme court of the District, where the bill was dismissed, and was heard in the Supreme Court of the United States on Brown's appeal. The latter court affirmed the decree below, and the District thus escaped liability for what would have proved heavy damages. The amount involved was not exactly ascertained, because it depended upon the discovery sought from the District, and the extent to which the pavements laid by the board of public works involved, or were thought to involve, the patents in controversy. Brown's patents were adjudged valid by the United States Circuit Court for the western district of Pennsylvania, and he received in that court a large award of damages against the city of Pittsburgh. He received, also, large sums of money from other municipalities for infringement, but we succeeded in establishing the fact that the alleged patents had been anticipated in England, and thereby procured the judgment of the Supreme Court that the alleged inventions did not possess patentable novelty, and that the patents were, therefore, void.

Besides these cases there were considered by that court the cases of Brewer, Gannon, and Emerson. The first of these was the suit in equity, heretofore reported by me, involving the effect of tax sales under certain conditions, in which the court below decided that a tax deed made in pursuance of a sale for the unpaid taxes of a certain year passed the property sold to the purchaser discharged of the liens of the taxes remaining due and unpaid at the time of sale. The Supreme

court of the United States dismissed the District's appeal in this case, on motion, upon the ground that as the amount involved did not exceed $5,000 that court was without jurisdiction to entertain the appeal. In the cases of Gannon and Emerson, which were actions against the District for personal injuries sustained by reason of defects in the highway, and in each of which judgment was rendered against the District for $5,000, the court also dismissed the writs of error, upon the ground that interest accruing by law on the judgments could not be considered in determining the question of jurisdiction. The dismissal of the writs of error in these causes, while expected, is much to be regretted, as each of the causes presented for the first time to the Supreme Court of the United States the question of the liability of the District under its existing government for the class of injuries complained of. This question is, however, presented in other causes now pending in the court in which the question of jurisdiction does not arise. It is hoped at the present term to obtain a decision upon this interesting and important question as to the District's liability.

In the supreme court of the District fifty-one cases were finally disposed of, of which fourteen were in general term, ten in the circuit court, and twenty-seven in the criminal court. In this enumeration no account is taken of cases partially disposed of, or advanced towards final disposition. During the same period one hundred and fifty-eight new cases were instituted, to which the District or its officers were parties, of which twenty-three were commenced on the law side, one hundred and three in equity, and thirty-two were docketed on the criminal side of the court. In this enumeration no account is taken of cases in the police court, which are the subject of report by the special assistant attorney, submitted herewith. Of the new cases instituted in equity, ninety-one were for the trial and commitment of lunatics. Of the cases disposed of in general term, the great majority involved taxes and special assessments, and the decisions therein, as a rule, were against the validity of the taxes or assessments complained of. Most of these cases were begun by certiorari and the grounds of attack upon the action of the taxing officers were quite exclusively technical, and the assessments when set aside were set aside by the court upon what appeared to this office as comparatively unimportant irregularities. Since the Brewer case, however, until the present time the court has asserted and re-asserted principles respecting the levy of special assessments and the force and effect of tax sales and deeds destined, I fear, to continue an embarrassment and involve no little loss to the District, because of the careless or inaccurate acts of past officers.

The only other case heard in the general term that need be noted is that of the District against John Curtin. This was a prosecution begun by the District in the police court against Curtin for selling liquor on Sunday in Georgetown. The defense was made that there is no valid subsisting law prohibiting the sale of liquor on Sunday in Georgetown, and though the case was argued at great length the court has not yet decided it. This case calls attention anew to the disordered condition of the local ordinances in force in the District. As I have heretofore had occasion to report, there are four sets of such ordinances; one emanating from the late corporation of Washington, one from the late corporation of Georgetown, one from the late levy court governing the county of Washington, and one from the late legislative assembly of the District. It is a reproach to the Legislature that this condition of things has been permitted to continue so long. The laws of the late

legislative assembly are, of course, in force throughout the District, but the ordinances of the other bodies mentioned are limited in their application to the respective territories governed by those bodies. I beg to suggest as a simple expedient, in advance of an intelligent code of local laws, the extension by Congress of the valid ordinances of the corporation of Washington to all parts of the District. This might be done by a simple act in no wise affecting the validity of the laws of the assembly.

As the cases disposed of in the other branches of the court were determined at special term and, when not insignificant, have been carried up for consideration by the higher branch of the court, further notice of them is unnecessary.

As in the preceding year, the appeals from the police court to the criminal court have been promptly disposed of, and the business kept down to a volume easily within control. Under existing conditions, which promise to continue, no such delay as was formerly incurred in the hearing of these causes is anticipated.

Besides the causes tried before the regularly constituted tribunals there were tried and disposed of during the year the long-pending claims of Samuel Strong against the District of Columbia. These claims were originally brought by Strong against the District in 1874 for work and labor alleged to have been done and expended under the direction of the late board of public works of the District. The amount claimed, with interest, aggregated upwards of $400,000, and the suits have a history interesting and tortuous, into which, however, it is not necessary now to go. After various vicissitudes in the courts, and after two attempts at settlement by referees, the causes were, by joint resolution of Congress, approved July 10, 1888, referred to the arbitrament of three persons to be appointed by the President, whose award, or that of a majority of them, was to be final and conclusive between the parties. On the preceding reference Strong obtained judgment against the District for upwards of $230,000, and this office resolutely opposed the passage of the joint resolution in question, in the belief that it would invite a disregard by the referees of the principles of law in accordance with which, as we thought, the causes should be determined, and because of our confidence in the position that under the law Strong was not entitled to any compensation whatever. While the resolution was under consideration by Congress, and before its approval by the President, the Supreme Court of the United States, in two cases against the District arising in the Court of Claims, with which our office has not to do, decided in accordance with our view the main question thus presented; but, by reason of the fact that the decisions had not been reported prior to the approval of the resolution, they were unknown to us and could not be brought by our office to the attention of Congress or the President. Had such decisions been known they must have influenced Congress to reject the proposed settlement by arbitration.

As it was, however, the resolution became a law, and Messrs. D. Cady Herrick, of Albany, N. Y., Samuel D. Halliday, of Ithaca, N. Y., and Joseph J. Darlington, of this city, were appointed by the President as referees. The referees began their consideration of the causes on the 24th of September, 1888, and concluded their labors by the rendition of an award on the 12th day of January, 1889. The record of these causes was so voluminous as to occupy in all something over five

thousand octavo printed pages, and the questions of law and fact involved were numerous and intricate. The trial of the causes on the part of the District fell wholly to the assistant attorney and required his undivided attention for some two months. In view of the volume of the record, and the exacting character of the duty of defending the District in the causes, Congress was asked to provide for special counsel to aid in representing the District, and in the deficiency act passed October 19, 1888, it did so provide by appropriating the sum of $2,500; but as this appropriation was made while the causes were actually under trial before the referees, it came too late to be properly availed of. The result of the labors of the referees was an award against the District in the sum of $28,257.38 with interest from November 10, 1874. This result was a practical victory for the District. I am informed, and I do not doubt, that the sum awarded was wholly on account of one piece of work unfinished at the time of the abolition of the board of public works, and in respect of which, therefore, that board could not fully carry out the provisions of its contract with Strong. It is a source of congratulation to the office that this litigation, which had been pending for upwards of fourteen years, has at last been quieted and that it has been terminated in a manner so favorable to the interests of the District.

In my last two reports I have called attention to the absence of any existing law providing for condemning a right of way for a sewer, or condemning a public alley, except on petition of private owners. This is a serious defect which should not longer continue.

I repeat what I said in my last report as to the necessity of some provision relating to the commitment of insane persons to the Government Hospital for the Insane. Under existing conditions, embarrassing questions on this subject often arise which should not be permitted to go longer without attention. In addition, the appropriation for the trial of the insane is much too small, and should be increased to at least $1,000. In this connection an embarrassment has arisen in the use of this fund by reason of the peculiar wording of the appropriation. As now worded, the appropriation reads:

To defray the expenses attending the execution of writs de lunatico inquirendo, and commitments made thereunder, in all cases of indigent insane persons committed to the Government Hospital for the Insane by order of the executive authority of the District of Columbia, etc.

Placing stress upon the word "committed," the accounting officers of the Treasury have held that unless the party tried was actually found *insane and committed*, no allowances for the expenses of the trial could be made out of this appropriation. While this seems to me an over-refinement of construction, the United States marshal hesitates to issue and execute this class of writs for the reason that he can not be guaranteed in advance that they will result in conviction.

I suggest that, in order to avoid such questions in the future, the language of the appropriation be changed so as to read:

To defray the expenses attending the suing out and execution of writs de lunatico inquirendo, and commitments made thereunder, in all cases of indigent insane persons committed, or sought to be committed, to the Government Hospital for the Insane, by order of the executive authority of the District of Columbia, etc.

I repeat also what I said in my last two reports touching the increase in the duties of the office, and call attention to the estimates heretofore submitted, which, in view of this increase, I beg to urge upon your consideration.

The report of Mr. Shillington, special assistant attorney, showing his labors and their results in the police court, is appended.

Although this report is supposed to deal exclusively with matters arising within and relating to the fiscal year ending June 30, 1889, I deem it not amiss to add that, in view of circumstances fully within your knowledge, I and the assistant attorney, Mr. Davis, have tendered our resignations, which have been accepted. I retire from the office on December 1, 1889, and Mr. Davis retires on November 1, after serving the District in our present capacities upwards of twelve and four years respectively. It would, perhaps, be unbecoming to dwell upon the growth of the office in importance and extent of duties during those periods, and I refer to that matter solely to enforce upon your attention and that of Congress the necessity of providing some more adequate compensation to the incumbents. This suggestion is very much enforced, in view of your recent order requiring the office to be removed to the District Building. I confidently assert that adequate service can not be procured for the attorney's office, if it is to be located at the District Building, for less than the sums that I have already suggested as proper salaries. The attorney and assistant attorney being located at the District Building must necessarily quite abandon all hope of practice outside the office, and in behalf of our respective successors, as well as in behalf of those of the office force who are to remain, I beg to urge upon you and upon Congress the eminent justice of seeing that officers whose time and attention are so much engrossed by the public service are not inadequately compensated.

Respectfully,

A. G. RIDDLE,
Attorney District Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

OFFICE OF THE ATTORNEY FOR THE
DISTRICT OF COLUMBIA,
Washington, D. C., October 7, 1889.

SIR: I have the honor to submit herewith a full report of the cases tried in the police court from July 1, 1888, to June 30, 1889, as follows:

Cases tried	9,665	Suspended	136
Convicted	8,609	Nolle prossed	172
Dismissed	673	Amount of fines imposed	$45,199.98
Continued	75		

The cases were distributed among the following different offenses:

Bar open after hours	10	Driving cattle through streets	2
Barking dogs	2	Driving over pavement	22
Bathing in the river	6	Driving through funeral	2
Building fire in street	2	Enticing prostitution	9
Concealed weapons	190	Excavation without permit	4
Contempt of court	1	Fast driving	98
Cruelty to animals	225	Female dog at large	2
Destroying lamp	1	Fighting dogs	3
Destroying private property	55	Firing pistol in street	26
Destroying public property	1	Indecent exposure	136
Disorderly in Georgetown	280	Interfering with poundmaster	1
Disorderly conduct	3,674	Injuring trees	8
Disorderly conduct in church	28	Light bread	3
Disorderly conduct in county	286	Nuisances	71

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Respectfully,

A. G. RIDDLE,
Attorney District Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

OFFICE OF THE ATTORNEY FOR THE
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Disorderly conduct	3,674	Injuring trees	8
Disorderly conduct in church	28	Light bread	3
Disorderly conduct in county	286	Nuisances	71

Obstructing alley	11
Obstructing pavement	24
Obstructing street	56
Occupying street	1
Occupying public grounds	2
Placing rubbish in street	2
Playing ball in street	25
Profanity	1,244
Refusing to assist officer	1
Refusing to pay hack hire	12
Selling liquor to minors	3
Selling to minors	1
Selling on Sunday	3
Selling potatoes by measure	1
Sounding horn	1
Setting off fire-crackers	6
Sunday bar	171
Selling unsound food	1
Short measure	2
Throwing stones	141
Trespass on parks	84
Tying horse to tree	2
Unlicensed auctioneer	1
Unlicensed bar	133
Unlicensed ball	3
Unlicensed eating-house	11
Unlicensed cattle dealer	20
Unlicensed entertainment	11
Unlicensed hacks	8
Unlicensed hotel	4
Unlicensed liquor dealer	10
Unlicensed livery-stable	6
Unlicensed pawnbroker	1
Unlicensed produce dealer	24
Unlicensed junk dealer	12
Unlicensed peddler	6
Unlicensed real-estate agent	1
Unlicensed slaughter-house	1
Vagrancy	1,825
Violating building regulations	63
Violating cart law	12
Violating hack law	50
Violating hotel law	1
Violating market regulations	1
Violating pawn law	6
Violating plumbing regulations	4
Violating police regulations	300
Violating snow law	6
Wasting Potomac water	203

Very respectfully,

JOSEPH SHILLINGTON,
Special Assistant Attorney of the District of Columbia.

A. G. RIDDLE,
Attorney of the District of Columbia.

F.

RECOMMENDATIONS AND ESTIMATES RELATIVE TO CHARITABLE INSTITUTIONS, ETC.

OFFICE OF THE COMMISSIONERS,
DISTRICT OF COLUMBIA,
Washington, November 30, 1889.

The PRESIDENT:

SIR: In addition to their annual report of their official doings during the fiscal year ended June 30, 1889, the Commissioners herewith submit for transmission to Congress—with their suggestions, recommendations, and estimates relative to the institutions involved—the reports received by them in pursuance of the following requirement contained in the District appropriation act of March 3, 1889:

> That hereafter the several institutions included under the heads of asylums, reformatories, industrial schools, and charities named in this act and in former and succeeding appropriation acts for the support of the District of Columbia, shall report to the Commissioners of the District, on or before the 1st day of October of each year, a full and detailed account of receipts and expenditures, and all their operations, and said Commissioners shall transmit the same to Congress at the beginning of each regular session, with such suggestions and recommendations as they may deem pertinent, together with estimates for maintaining the same.

The institutions referred to are discussed in this report in the order in which they appear in the District appropriation bill for the fiscal year to end June 30, 1890, in order to meet the views of the previous appropriation committees, who have indicated their preference that estimates of the Commissioners should follow the order of appropriations made for the preceding year.

WASHINGTON ASYLUM.

The number received at this institution during the fiscal year was as follows: At the work-house, 3,533; daily average, 240. At the almshouse, 332; daily average, 192. At the hospital, 445; daily average, 73; making a total daily average of 505 for all departments in the institution; an increase of 20 per cent. over that of the preceding year, at an average monthly cost of less than $8.50 for each, which is a remarkably low rate for an institution of this character.

This institution has furnished through its inmates 27,069 days' work on municipal improvements during the year; which, if rated at $1 a day, represents that amount saved to the public, and shows that the institution contributes largely to its own maintenance.

The female inmates of the institution also contributed largely to its support by the manufacture of articles of clothing for the inmates.

During the past year considerable public attention has been called to this institution, which has grown to be a large and important feature of the District government. The growth and consequent importance of this institution call for considerable additions to the permanent facilities and a suitable increase of the annual appropriation for current expenses, as recommended.

The Washington Asylum is the only charitable and reformatory institution solely under municipal control. The total amount estimated for is $100,250. The items of difference between this estimate and the appropriation for 1890 are—

(1) Increase of one overseer, at $800 per annum. This increase is rendered necessary by the normal enlargement of the institution.

(2) One watchman, at $365, has been added for same reason.

(3) The pay of the two female keepers at the work-house has been increased $60 per annum each, which is not more than is required to secure persons competent for the duty.

(4) Four cooks, at $120 per annum each, are estimated for instead of two at $120 and three at $160.

(5) One ambulance driver at $300. This duty has heretofore been performed by the hostler, but the growth of the institution renders a separate driver necessary.

(6) One trained nurse at $480. There has been a growing necessity for more intelligent supervision over the nurse department of the hospital for some years, owing to the increase in the number of patients and the character of their maladies.

(7) One tailor at $300 per annum.

(8) The contingent expenses are estimated at $50,000 instead of $40,000.

New appropriations are estimated for as follows:

Twenty thousand dollars to raise one of the magazine buildings two stories higher, and fit it up for a female work-house. The present accommodations are entirely inadequate for the proper confinement and treatment of this class of prisoners.

Five thousand eight hundred and fifty dollars is estimated for to enable the authorities to construct an addition, with bathing appliances, to the male work-house. The absence of these facilities has been a reproach to the institution.

Two thousand two hundred dollars is estimated for inclosing the grounds with a high board fence, not only for the purpose of excluding trespassers, but for the purpose of preventing the escape of prisoners and the straying of feeble-minded inmates.

Two thousand seven hundred dollars is estimated for to construct a building in which to temporarily detain alleged lunatics undergoing judicial examination with a view of deciding the question of their lunacy.

Four thousand two hundred dollars for new ward.

REFORM SCHOOL.

The Reform School of the District of Columbia is managed by a board of trustees, appointed by the President of the United States, with the exception of one member, who is a member *ex officio* by reason of his being one of the Commissioners of the District of Columbia.

The Commissioners' estimates for this institution for 1891 differ in several respects from the appropriation for 1890, as follows:

(1) Three foremen of workshops, at $1,500 per annum, to be apportioned as the board of trustees may deem advisable. This is designed to enable the authorities to diversify the kinds of work at which the inmates are employed. The superintendent of the chair shop has been dispensed with, because this character of work can no longer be profitably done at this institution.

(2) Six watchmen are estimated for, at $1,400, instead of five at $1,140. The increase is asked because of the constant surveillance necessary to prevent the development and practice of pernicious habits common among boys of the character committed to this institution, as well as to properly guard the property of the institution.

New appropriations for improvements are estimated for as follows:

For maintaining and improving the roadway and approaches, including grading and draining, $3,000.

The completion of one brick boiler-house, $2,500.

One 100-horse power boiler, with connections for steam heating, $1,200. This boiler is required as an alternative boiler in case of the disuse of the other for repairs, cleaning, etc.

Steam fitting, steam pipes, radiators, and connections for the old family building, $1,500. This building is now heated by furnaces, which are out of order, and it is desirable that the apartments should be heated by steam.

Purchase of machinery and tools for mechanical industries, $3,000.

Two brick water-closets, $2,000.

Painting buildings and barns, $1,000.

INDUSTRIAL HOME SCHOOL.

This institution is managed solely by a private corporation. The grounds and buildings occupied by it are owned by the District of Columbia. The Commissioners estimate $15,000 as the amount that should be appropriated for 1891.

SUPPORT OF THE INSANE.

The District is required by law to pay one-half of the cost of the support of patients sent to the asylum by the municipal authorities. The Commissioners estimate for this institution for 1891, $87,500, as recommended by the board of visitors of said hospital, on page 19 of their annual report for 1889.

RELIEF OF THE POOR.

The Commissioners estimate $16,000 for this purpose for 1891. This amount was appropriated for 1890. Previous to the last year $15,000 was annually provided for this purpose, to make available the $7,500 annually received as a franchise rental from the Washington Market Company for the occupation of the site of its buildings, corner Seventh street and Pennsylvania avenue. This fund is apportioned by the Commissioners for distribution through the police and health officers for supplies, medicines and medical attendance to the out-door poor, and in other small sums to private organizations adapted to effect the object for which this appropriation is made.

COLUMBIA HOSPITAL FOR WOMEN.

The Commissioners estimate $20,000 for this institution for 1891.

The Commissioners estimate for the following institutions the amounts set opposite to their names, as the nearest estimates they can make of the amounts that should be allowed to these institutions in view of the services they render to the public, and the amount of revenue available for charitable purposes:

Temporary home for soldiers and sailors, Grand Army of the Republic, of the District of Columbia	$2,500
Young Women's Christian Home	2,000
Women's Christian Temperance Union	1,000
Women's Christian Association	4,500
National Association for Destitute Colored Women and Children	12,000
Children's Hospital	5,000
St. Ann's Infant Asylum	6,000
St. Rose Industrial School	1,500
German Orphan Asylum (provided it furnishes a like amount)	5,000
Church Orphanage Association of St. John's Parish, District of Columbia	1,500
Washington Hospital for Foundlings	7,000
Association for Works of Mercy	2,500
National Homœopathic Hospital Association of Washington	6,000
House of the Good Shepherd	1,000
National Temperance Home	3,000
Central Dispensary, and Emergency Hospital	3,000
Little Sisters of the Poor	1,000
Night Lodging House	600
Columbia Institute for the Deaf and Dumb	10,500

The estimate for the Columbia Institute for the Deaf and Dumb is in accordance with the sundry civil appropriation act, approved March 2, 1889.

In regard to all of these institutions, excepting the Washington Asylum, the Commissioners have to rely almost entirely upon the reports made by the officers of such institutions, as they have not had the time to give them their personal surveillance nor the means to employ a qualified subordinate to obtain data necessary to arrive at an accurate idea of their workings and requirements. So far as their observation has extended, they are of opinion that some of these institutions are duplicating each other's work, and might be consolidated with advantage in the matter of economy and efficiency; but the Commissioners find, as their predecessors have reported to Congress, that, in order to deal with this subject intelligently, it will require the knowledge which can only be acquired through a subordinate municipal official having the right of access to the institutions in an official capacity. They recommend that provision be made for the employment of such an officer.

The total estimate for charitable and reformatory purposes is $368,602.

The estimated revenues available to meet these estimates, after providing for the items included in the general estimates submitted to the Secretary of the Treasury on the first of October last, is $401,658.35.

The Commissioners also transmit application for appropriation of the trustees of the Girls' Reform School, incorporated under an act of Congress approved July 9, 1888. Besides that application and the reports of institutions required by law hereinbefore mentioned to make reports to the Commissioners for transmission to Congress, the Commissioners have received reports and applications from private charitable and reformatory organizations which have not heretofore been named in any District appropriation acts. While the Commissioners have no official duty in respect to these reports and applications, the parties represent-

ing them are citizens of benevolence and reputation, whose suggestions merit attention, and they are therefore submitted to Congress for such action as it may deem suitable. These organizations are as follows: Children's Country Home, Eastern Dispensary, Home for Incurables, Homeopathic Free Dispensary, Hope and Help Mission, Mission School of Cookery, Newsboys' and Children's Aid Society, Washington Training School for Nurses, Woman's Dispensary, Women's Union Christian Association.

Very respectfully,

J. W. DOUGLASS,
L. G. HINE,
CHAS. W. RAYMOND,
Commissioners District of Columbia.

Estimates of appropriations required for the fiscal year ending June 30, 1891, by the Commissioners of the District of Columbia, for the several institutions included in District appropriation acts, under the heads of asylums, reformatories, industrial schools, and charities.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.
Washington Asylum (Vol. 25, page 807):	
One intendant	$1,200
One matron	600
One visiting physician	1,080
One resident physician	480
One clerk	600
One baker	420
Two overseers at $800 each ($800 submitted)	1,600
Five overseers at $600 each	3,000
One engineer	600
One assistant engineer	350
One second assistant engineer	300
Six watchmen at $365 each ($365 submitted)	2,190
One blacksmith	300
One hostler	240
One female keeper at work-house ($60 submitted)	360
One female keeper at work-house ($60 submitted)	240
Four cooks at $120 each ($60 submitted)	480
One ambulance driver ($300 submitted)	300
One trained nurse ($420 submitted)	420
Four nurses at $60 each	240
One tailor	300
For contingent expenses, including improvements and repairs, provisions, fuel, forage, lumber, shoes, clothing, dry goods, hardware, medicines, repairs to tools, cars, tracks, steam heating and cooking apparatus, printing and other necessary items and services	50,000
For raising magazine building two stories and fitting it for female work-house (submitted)	20,000
Constructing addition, with bathing appliances, at male work-house (submitted)	5,850
Inclosing grounds (submitted)	2,200
Erecting building for detention of alleged lunatics pending judicial inquiry as to their condition (submitted)	2,700
New hospital ward for operating purposes (submitted)	4,200
Reform School:	
One superintendent	1,500
One assistant superintendent	900
Teachers and assistant teachers	3,500
One matron of school	600
Three matrons of families, at $180 each	540
Three foremen of workshops (submitted)	1,500
One farmer	480
One engineer	396
One assistant engineer	300
One baker	300
One cook, one shoemaker, one tailor, at $300 each	900
Two dining-room servants, one seamstress, one chambermaid, at $144 each	576

Estimates of appropriations required for the fiscal year ending June 30, 1891, etc.—Cont'd.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.
Reform school—Continued.	
One laundress ($36 submitted)	$180
One florist	360
Watchmen, not exceeding six in number ($260 submitted)	1,400
One secretary and treasurer of board of trustees	600
For support of inmates, including groceries, flour, feed, meat, dry goods, leather and shoes, gas, fuel, hardware, table-ware, furniture, farm implements, and seeds, harness and repairs to same, fertilizers, books, stationery plumbing, painting, and glazing, medicines, medical attendance, stock, fencing, and repairs to buildings, and other necessary items, including compensation not exceeding $900 for additional labor or services, and for transportation and other necessary expenses incident to securing suitable homes for discharged boys, not exceeding $500, all under the control of the Commissioner	26,000
Permanent improvement of roadways and approaches, including grading and draining (submitted)	3,000
Construction of permanent boiler-house of brick (submitted)	2,500
One 100 horse-power alternative boiler for steam-heating and connections (submitted)	1,200
Steam-fitting and steam-pipes to old family building, radiators and connections (submitted)	1,500
Purchase of machinery, tools, and fixtures, and for incidental expenses in establishing new mechanical industries, or so much thereof as may be necessary (submitted)	3,000
Two brick water-closets for use of main building and "A" family building (submitted)	2,000
Painting buildings, including barn (submitted)	1,000
Provided the proceeds of farm and shops shall be covered back into the Treasury to be divided equally between the District of Columbia and the United States.	
Industrial Home School:	
Maintenance of school	12,500
Material for industrial labor and for necessary repairs	2,000
Small hospital building for the institution	500
Support of the Insane:	
The Government Hospital for the Insane	87,500
Charities:	
Relief of the poor	16,000
Temporary Home for Soldiers and Sailors, Grand Army of the Republic, District of Columbia	2,500
Young Woman's Christian Home	2,000
Woman's Christian Temperance Union	1,000
Columbia Hospital for Women and Lying-in Asylum	20,000
Women's Christian Association	4,500
National Association for Destitute Colored Women and Children	12,000
Children's Hospital	5,000
St. Ann's Infant Asylum	6,000
St. Rose Industrial School	1,500
German Orphan Asylum (provided it furnishes a like amount)	5,000
Church Orphanage Association of St. John's Parish of the District of Columbia	1,500
Washington Hospital for Foundlings	7,000
Association for Works of Mercy	2,500
National Homeopathic Hospital Association of Washington, District of Columbia	6,000
House of the Good Shepherd	1,000
National Temperance Home	3,000
Central Dispensary and Emergency Hospital	3,000
Little Sisters of the Poor	1,000
Night Lodging House	600
Columbia Institute for Deaf and Dumb	10,500
Total	368,582

F 1.

THE WASHINGTON ASYLUM.

WASHINGTON ASYLUM,
Washington, D. C., August 15, 1889.

GENTLEMEN: I respectfully submit the following report of the operations of this institution for the fiscal year ending June 30, 1889, with estimates for the support of the same for the fiscal year ending June 30, 1891.

On the 1st day of July, 1888, there were 156 inmates of the almshouse, the number admitted during the year was 332; 308 were discharged during the year, and there are now remaining 180.

The number of prisoners in the work-house July 1, 1888, was 156; received during the year, 3,533, of this number 3,444 were discharged, leaving the number of prisoners July 1, 1889, 245.

There are a number of persons, both male and female, in the institution who draw pensions from the Government for disability or loss of relatives which, if properly used, would nearly support them; but which is now in most cases squandered, and the pensioner is soon returned in a worse state than when he left. I recommend that such action be taken, or if necessary, such legislation be asked for, as will wholly or in part re-imburse the institution for any expense incurred for the maintenance of any pensioner by the pension agent out of the money drawn each quarter by any pensioner who seeks an asylum here, the same not to exceed the average per capita cost of the maintenance of the inmates of the institution.

The health of the inmates of the almshouse has been good, and their duties light. The house is clean, comfortable, and well warmed during cold weather. The diet is amply sufficient to sustain them in good physical condition, their meals are regular, and the general conditions are such as conduce to long life. The mode of admittance is simple and easy, and none are denied shelter who are in the least deserving, if destitute. In fact, many are admitted in a half-famished condition, who, when they are restored and able to work, are impudent and unruly. This class should be discharged and kept out. The almshouse should be a retreat for the worthy poor; the unruly and vicious should be sent to the work-house if they must be supported by the District, where they are compelled to labor, and can be made self-supporting.

During the past year an iron fire-escape and stand-pipe were erected, at the alms house under the supervision of the building inspector, making the building more secure against loss by fire and providing a way of escape for the inmates in case such a calamity should occur. Gas was also introduced and was first used on the night of October 25 last. While gas makes an additional expense for the institution, it renders the building more safe from accident than the oil-lamp system, and adds much to the comfort of the inmates. I am pleased with the result.

New flooring has been laid in some of the hall ways and a portion of the plumbing has been renewed. Painting, glazing, and minor repairs necessary for the preservation of the building have been done from the contingent fund. No extensive improvements or repairs to buildings during the past year have been attempted from the fact that no fund for this purpose was available, the estimates for a repair fund having been stricken out by Congress.

There are twenty buildings connected with the institution, fifteen of which are used for habitation, and it is not possible to keep them in repair and in presentable appearance without an annual outlay. There should be at least $2,500 appropriated annually for this purpose alone.

The hospital department buildings have received such attention as was possible; the dispensary was painted outside and inside. A new kitchen, 44 by 44 feet, with a suitable range for cooking, was built by contract under supervision of Thomas B. Entwisle, the building inspector, and has proved a success. The old kitchen was stripped inside, and new plastering, flooring, and painting have fitted it for use in any emergency, or for storing purposes, for which it is now used.

A change in the visiting physician was made during the year, Dr. Thomas I. Chew having resigned, and Dr. J. C. Howard was appointed to the position. Dr. Howard has been ill for several months past, and the responsibility for the care of the patients has devolved on the resident physician, Dr. Charles K. Koones, assisted by Dr. E. J. Sexton. They have lost no opportunity to prove their interest and efficiency, and are entitled to commendation and thanks for constant attention and uniform kindness to the inmates and employés of the institution at large, and from myself in particular, and I take pleasure in recommending them to your consideration.

For a more extended report of the hospital and its operations I respectfully refer you to the appended report of the physician in charge. I also beg that the estimates given for the erection of a ward for white males who are now quartered in an old building formerly used as a colored school-house, and which is entirely unsuited for use as a ward for the sick, and is not worth repair, may meet your approval and that it may be granted by Congress. I also beg leave to call your attention to the importance of securing a better class of nurses and cooks for the hospital. The allowance of $5 per month simply renders impossible the carrying out of any improvement in this important branch of the institution. I have estimated $15 per month for this service, and trust that this, in fact too small, allowance, may be appropriated.

The male work-house is in need of extensive improvement and repair. I have estimated for a new tin roof for the entire building, according to instructions received from the inspector of buildings. Also in accordance with the recommendation of the recently appointed board of visitors, for a lavatory, bathing facilities, clothes room, closet system, sewer connections, and fuel vault, the sum of $7,500 is asked. This sum will erect a brick building, attached by covered iron entrances to each floor; a system of washrooms and sewerage that will relieve the building of most of its present obnoxious features, prevent future unpleasant comments, and add much to the comfort and health of its inmates. The building was finished outside by a rough coat of cement and gravel. This is being worn off by the elements, and in order to preserve the building must be repaired or renewed. Only the slightest repairs have been done to the building for the past year because of lack of funds. No improvement in the discipline among its inmates can be noted during the past year, due principally to the small number

of officers allowed and the low rate of pay for this disagreeable duty and long hours of service required. Such pay should be allowed these officers as would enable the Commissioners to secure persons whose reputation, integrity, and energy would be an example to those coming under their care.

Mr. H. C. Addison, a most efficient and reliable officer, who had had charge of the building since its completion, tendered his resignation about one year ago on acount of the small pay allowed. I have never been able to replace him or to secure an officer capable to fill this important trust acceptably for the same reason.

The female work-house is in good sanitary condition. The most urgent need that exists is for a dining-room for prisoners' use, and cells disconnected from the building for discipline or punishment. There are at present no rooms properly arranged for diciplinary purposes, which fact is well known to the prisoners, who are quick to take advantage of our inability to properly punish them for breaches of discipline.

The large number of female prisoners now confined (98) far exceeds the number during any other period within my experience. The majority of them are dissolute young colored women of the very vilest class; they are beyond the sense of shame and deaf to reasoning advice, and delight in nothing so much as the most obscene language and lewd actions. In order to bring them to some sense of respect for the rules of the house, there should be a place constructed and a mode devised for short, sharp, and decisive punishment. For this purpose I recommend the construction of a small building divided into separate small cells, ventilated and secured against the escape of sound. Such a building would require an appropriation of $4,500.

I would also call your attention to the lack of employment for the class of prisoners last mentioned, hoping you may be able to devise some mode for their constant employment at some useful industry even if it should fail to be remunerative. I believe it to be the duty of the authorities to provide labor for those supported at public expense, by which they may at least be taught what labor is, and become strengthened and fitted when released to earn their own living.

I beg also once more to call attention to the large number of small boys sent to the work-house through the police court, and urge upon your honorable board the necessity for such action as may lead to their being sent to the Reform School.

I also desire to call your attention to the condition of potter's field and the Small-pox Hospital, and renew my recommendation that land be purchased on the outskirts of the city for this purpose, as the ground used at present as a burial place for the indigent poor of the District is full, having been buried over several times. In my communication of March 4, 1884, I referred to the subject as follows:

I beg leave to call your attention to the recommendations in my last annual report in regard to the burial grounds belonging to this institution and commonly known as potter's field, and to express the hope that such action may be taken as will lead to the procuring of a more suitable site for this purpose. The present grounds are nearly filled, they having been graded and buried over several times, so that it is now almost impossible to dig a grave without turning up the remains of old coffins. This ground never was fit for the purpose of burial, being low and swampy. Common decency and the health of the city demand that a new and better site be selected. I would therefore respectfully suggest that an appropriation be asked of Congress for the purchase of suitable grounds for this purpose, and for the erection of a pest-house outside the city limits; also that provision should be made for the turning over to the medical colleges of the District the criminal and pauper unclaimed dead under proper regulations.

The approximate value of the farm and garden produce raised and consumed on the place was as follows:

Articles.	Quantity.	Amount.	Articles.	Quantity.	Amount.
Rye ..... bushels	200	$125.00	Melons	1,000	$100.00
Straw ..... tons	12	216.00	Celery	2,000	40.00
Corn sugar ..... bushels	75	75.00	Parsley ..... bunches	100	50.00
Fodder ..... tons	5	25.00	Cabbages	10,000	250.00
Hay ..... do	4	80.00	Berries and grapes	.....	75.00
Beets ..... bushels	600	300.00	Eggs ..... dozen	1,200	240.00
Carrots ..... do	500	250.00	Chickens	100	25.00
Mangolds ..... tons	28	280.00	Milk ..... gallons	5,400	1,080 00
Onions ..... bushels	25	30.00	Pork ..... pounds	13,755	825.30
Peas ..... barrels	15	35.00			2,685.30
Beans ..... do	10	25.00			1,441.00
		1,441.00			4,126.30

The value and number of days' labor furnished the District on street grading by use of tram-way on Kentucky avenue, Georgia avenue, Fifteenth, Sixteenth, and G streets, southeast, is—

Days' work of prisoners	15,188	
Days' work of officers	1,008	
Days' work of horses	747	
At an average of $1 per day		$16,943
Furnished the District through the health office and engineer's department—		
Days' labor of prisoners	7,039	
Days' labor of officers	889	
At $1 per day		7,928
Also including streets at the market—		
Days' labor of prisoners	1,441	
Days' labor of officers	153	
Days' labor of horses	604	
At $1 per day		2,198
Total		27,069

The gang employed in cleaning streets in the vicinity of the markets collected 302 loads of garbage and manure, which was used on the farm.

The value of the labor of the prisoners employed in the different shops, buildings, and grounds, at an average of 40 men per day, would be worth at least $6,000 if got in any other way.

The principal articles of clothing, etc., made during the year in the tailor-shop and at the female work-house were as follows:

Work-house coats	163	Bed-ticks	223
Work-house pants	295	Pillow-ticks	251
Work-house vests	128	Pillow-cases	354
Jeans coats	17	Sheets	416
Jeans pants	217	Towels	248
Jeans vest	75	Chemise	362
Melton coats	35	Night-gowns	81
Melton pants	45	Under bodies	80
Melton vests	34	Basques	40
Check shirts	516	Petticoats	97
White shirts	262	Sacques	26
Flannel shirts	40	Aprons	53
Drawers	61	Sun-bonnets	5
Work-house dresses	33	Caps	24
Work-house gowns	51	Window-curtains	18
Poor-house dresses	115	Overcoats	3

At the male work-house there were repaired during the year 1,763 pairs of shoes, 105 pieces of harness, 11 collars, and 20 halters.

Of the 1,993 different persons committed to the male work-house during the year, 1,546 were committed only once, 290 twice, 92 three times, 39 four times, 12 five times, 7 six times, 5 seven times, 1 nine times, and 1 eleven times. Of the above number 116 white and 855 colored persons were 20 years of age and under.

There were 818 commitments to the female work-house during the same time, of whom 218 were white and 600 colored persons. Of this number 305 were committed only once, 85 two times, 28 three times, 30 four times, 10 five times, 11 six times, 1 seven times, and 2 eight times. Of the above, 4 white and 266 colored persons were 20 years of age and under.

The stock on the farm consists of 16 horses, 10 cows, 1 bull, 3 heifers, and 96 hogs.

During the year 500 coffins were issued on order from the health office and coroner, and 63 were used at this institution. During the same time there were 572 burials in the potter's field.

The large average daily increase in number of inmates of the past year over any previous year of the existence of the institution calls for careful consideration in providing for comfortable shelter and necessary provisions to maintain them. I have estimated for a daily average of 525 persons at $100 per annum each, which should not be reduced if reasonably good care is desired for them. The prospect now is that the number for the present year will exceed the number estimated for and that a large deficit may be looked for in the contingent fund for the year ending June 30, 1890. I have for the past seven years so managed the institution that no deficit has occurred, but the present increase in the price of goods, and the extremely large number now present to provide for will without doubt cause a deficiency even if the strictest economy is practiced. I therefore hope that the estimates furnished may be allowed in full.

The duties of the clerk increase with the growth of the institution, and I ask that his pay may be increased to $720 per year. I have also asked for an increase of $300 per year for the intendant, and hope it may meet your approbation. Also that the force may be increased by regular appropriation by one overseer at $800, one at $600, one watchman at $365, one night watchman at $365, and one tailor at $300. Also for one ambulance driver at $300, and an increase of $10 per month for one of the keepers of the female work-house and for the hostler or driver. If faithful service is to be obtained it must be paid for at reasonable rates. It is very poor economy for the Government to allow compensation for employés of an institution which debar its managers from securing first-class assistants.

The isolated situation of the institution, the repulsive and vicious classes it shelters, the long hours of continuous service required of its employés, together with the individual responsibility necessarily imposed, makes it impossible to secure worthy and respectable persons in many of the situations so poorly provided for. I trust you may give this subject your earnest attention and impress upon Congress the necessity for more liberal compensation and the asked for increase in the number of employés.

The religious services here have been conducted regularly by volunteer attendance of ladies and gentlemen, who have for several years devoted their Sabbaths so acceptably that their efforts merit our warmest thanks. I also desire to thank the large number of ladies and gentle-

men who have kindly furnished the inmates with many nice packages of reading matter which the asylum ambulance has collected by request.

The annexed tables of statistics will show the number cared for in each department, their classification, cost of maintenance, and the daily average number for the past seven years; also of receipts and expenditures for the year ending June 30, 1889. All of which is respectfully submitted.

I have the honor to submit the following estimates for the maintenance and improvement of the institution for the fiscal year ending June 30, 1891:

For contingent expenses, including provisions, fuel, forage, groceries, meats, dry goods, shoes, lumber, hardware, medicines, gas, ice, repairs, extra services, and other necessary articles	$52,500
The erection of and furniture for hospital ward for white males, for 30 beds, including closets, bath-room, etc	5,000
Erection of addition to male work-house, for bath, lavatory, closets, clothes-rooms, fuel, vault, and hot-water facilities	7,500
New tin roof for male work-house	575
Additional story for magazine No. 2, for habitation of male paupers, including cooking apparatus, and kitchen	9,000
Dining-room and punishment cells at female work-house	4,500
One intendant	1,500
One matron	600
One visiting physician	1,080
One resident physician	480
One assistant resident physician	300
One clerk	720
One baker	420
Two overseers for male and female work-house, at $800 each	1,600
Five overseers, at $600 each	3,000
One engineer	600
One assistant engineer	350
One assistant engineer	300
Six watchmen, at $365 each,	2,190
One night watchman	365
Two female keepers, at $300 each	600
One teacher	300
One blacksmith	300
One tailor	300
One ambulance driver	300
One hostler	240
Four cooks, at $120 each	480
Five nurses, at $180 each	900
Total	96,600

Very respectfully,

WALTER H. STOUTENBURGH,
Intendant Washington Asylum.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

STATISTICAL TABLES.

WORK-HOUSE.

Number of prisoners in work-house July 1, 1888		156
Number of prisoners received		3,533
		3,689
Number of prisoners discharged	3,400	
Number of prisoners eloped	44	
		3,444
Total number remaining in work-house June 30, 1889		245

COLOR AND SEX.

White males	957
White females	218
Colored males	1,758
Colored females	600
Total	3,533
Daily average number in work-house	240

CHARGES.

Disorderly	1,425	Disorderly and destroying private property	2
Vagrancy	1,380	Injuring a tree	2
Profanity	386	Indecent exposure and disorderly	2
Carrying concealed weapons	82	Playing ball in street	2
Indecent exposure	56	Selling unsound fish	1
Trespass on park	30	Refusing to pay hack hire	1
Throwing stones in street	19	Throwing stones and vagrancy	1
Cruelty to animals	19	Violating health regulations	1
Concealed weapons and disorderly	14	Profanity and trespass on park	1
Destroying private property	14	Vagrancy and refusing to pay hack hire	1
Violating police regulations	10	Vagrancy and profanity	1
Fast driving	10	Profanity and driving cattle through streets without permit	1
Profanity and disorderly	9	Firing a pistol and destroying private property	1
Enticing prostitution	7	Profanity and indecent exposure	1
Concealed weapons and vagrancy	6	Firing a pistol in street	1
Concealed weapons and profanity	6	Disorderly and disturbing church	1
Disturbing church	5	Defacing private property	1
Vagrancy and disorderly	4	Eloped and recaptured	18
Unlicensed liquor dealer	3	Total	3,533
Discrderly and throwing stones	3		
Firing a pistol in alley	2		
Violating hack law	2		
Indecent exposure and concealed weapons	2		

NATIVITY.

Native.

Distriot of Columbia	1,514
Virginia	780
Maryland	495
Peunsylvania	91
New York	86
Massachusetts	27
Ohio	23
North Carolina	20
South Carolina	14
Illinois	14
Georgia	12
New Jersey	11
Connecticut	10
Kentucky	9
Tennessee	9
Rhode Island	9
Alabama	8
Maine	8
Missouri	6
Texas	6
Florida	5
Kansas	5
West Virginia	4
Mississippi	3
Delaware	3
Michigan	3
Indiana	3
Wisconsin	2
Louisiana	1
Vermont	1
Arkansas	1
Iowa	1
California	1
Minnesota	2
Montana	2
Total	3,189

Foreign.

Ireland	205
England	39
Germany	37
Italy	9
Switzerland	8
Scotland	8
Canada	6
Russia	5
Sweden	4
West Indies	3
Wales	3
France	2
Poland	2
Holland	2
Denmark	1
South America	1
New Brunswick	1
Newfoundland	1
Austria	1
Bavaria	1
Portugal	1
Bohemia	1
Brazil	1
Unknown	2
Foreign	344
Native	3,189
Total	3,533

ALMSHOUSE.

From July 1, 1888, to June 30, 1889.

Number of inmates in almshouse July 1, 1888	156
Number of inmates received	332
	488
Number of inmates discharged	308
Total number of inmates remaining June 30, 1889	180

COLOR AND SEX.

White males	179
White females	57
Colored males	58
Colored females	38
Total	332
Daily average number in almshouse	192

NATIVITY OF INMATES.

Native:		Native—Continued:	
District of Columbia	71	Iowa	1
Virginia	61	United States	4
Maryland	36		224
Pennsylvania	10		
New York	7	Foreign.	
New Hampshire	5		
Michigan	4	Ireland	64
Ohio	3	Germany	16
North Carolina	3	England	12
Georgia	3	France	6
Louisiana	2	Scotland	3
Massachusetts	2	Canada	3
South Carolina	2	New Brunswick	1
Mississippi	2	Unknown	3
Missouri	2		
Indiana	2	Foreign	108
Illinois	1	Native	224
New Jersey	1		
West Virginia	1	Total	332
Connecticut	1		

Statement of the daily average number of inmates in the work-house, almshouse, and hospital for the last seven years.

For year ending June 30—	Work-house.	Alms-house.	Hospital.	Total.
1883	143	126	68	337
1884	174	124	68	366
1885	239	124	84	447
1886	223	136	77	436
1887	188	161	76	425
1888	168	171	82	421
1889	240	192	73	505

Detailed account of receipts and expenditures of Washington Asylum from July 1, 1888, to June 30, 1889.

SALARIES.

W. H. Stoutenburgh, intendant	$1,200.00
S. F. Stoutenburgh, matron	600.00
T. I. Chew, visiting physician	546.00
J. C. Howard, visiting physician	534.00
C. K. Koones, resident physician	480.00
D. Tindall, clerk	600.00
R. Nolan, baker	7.99
W. B. Arendes, baker	384.60
G. Smith, baker	17.12
F. B. Graff, overseer	800.00
H. C. Addison, overseer	101.00
D. Stewart, overseer	405.43
G. Martin, overseer	600 00
G. W. McMahon, overseer	600.00
R. A. Milstead, overseer	600.00
S. E. Arnold, overseer	558.57
T. Schnopp, overseer	494.10
J. J. McGuigan, engineer	451.65
J. A. Milstead, engineer	148.35
J. D. C. Stoutenburgh, assistant engineer	350.00
A. B. Clark, assistant engineer	300.00
F. McEntee, watchman	365.00
J. D. O'Connor, watchman	30.75
W. Arnold, watchman	365.00
H. Davy, watchman	182.50
F. T. Auldridge, watchman	334.25
J. G. Lee, watchman	124.31
A. H. S. Burche, watchman	55.15
R. F. Ratherdale, blacksmith	300.00
Christine Hilfinger, teacher	300 00
Frances Ferguson, keeper, female work-house	300.00
Emily Watkins, keeper, female work-house	15.20
Martha Mundell, keeper female work-house	164.80
Henry Henson, hostler	120.00
Charles Howard, ambulance driver	64.04
Harriet Dotson, cook	20.20
Mary Smith, cook	10.10
Ada Tyng, cook	60.00
Charles Schwenk, cook	15.00
Elizabeth Brown, cook	60.00
Margaret Chambers, cook	19.90
Unity T. Hulse, cook	10.10
William Gaffney, cook	27 03
Ella Boston, cook	77.60
James Ferguson, nurse	90 00
James Garnett, nurse	56.70
Kate Bishop, nurse	109.90
Mary E. Jackson, nurse	24.95
Mary Shugrue, nurse	60.00
Frank McEntee, sr., nurse	59.80
Abbie Gillan, nurse	9.85
Raymond Horsman, nurse	17.16
Jennie McCoy, nurse	12.53
Henry W. Potter, nurse	30 20
James Hansborough, nurse	3.30
Agnes Reeves, nurse	2.47
Total	13,276.60

MISCELLANEOUS.

1888.		
July.	J. B. Bryan & Bro., groceries	960.72
	S. Auth, fresh meat	343.95
	Scheller & Stevens, drugs	38.78
	John Miller, fuel	1,012.70
	Mayfield & Heiston, fuel	630.00

1888.		
July.	Jas. L. Barbour & Son, groceries	$238.22
	W. F. Hewett, forage	76.00
	Great Falls Ice Company, ice	38.48
	E. G. Wheeler, hardware	29.11
	Jackson & Co., marketing	25.00
	J. T. Walker & Son, lime	4.75
Aug.	J. B. Bryan & Bro., groceries	927.45
	J. E. Chapman, fuel	735.45
	Jas. L. Barbour & Son, groceries	232.80
	B. Rich & Son, shoes	181.06
	Myers & Loving, forage	90.39
	Scheller & Stevens, drugs	82.38
	J. C. Ergood, groceries	152.50
	S. Auth, fresh meat	290.62
	Geo. J Johnson, dry goods	98.57
	G. T. Dunlop, fertilizer, seed, etc	74.88
	E. G. Wheeler, hardware	50.01
	Great Falls Ice Company, ice	49.86
	W. F. Hewett, forage	48.10
	Chas. Fisher, hardware	31.50
	H. I. Gregory, stoves and tin-ware	27.20
	Jackson & Co., marketing	25.00
	H. W Blunt, lime	9.80
	F. P. May & Co., hardware	7.38
	V. Clinton Reynolds, gas-tar	7.52
	Henry Lyles, sand	6.00
	Chas. T. Carter, hardware	5.48
	J. T. Walker & Sons, lime	4.75
	W. B. Moses & Sons, furniture	2.50
July.	E. C. Gatchell, carpenter	75.00
	B. W. Hunter, carpenter	36.00
	W. O. Wetzel, painter	50.00
	C. M. Prather, watchman	31.25
	A. H. S. Burche, laborer	31.25
	E. Wallingsford, laborer	25.00
	J. G. Lee laborer	20.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	12.25
Aug.	E. C. Gatchell, carpenter	81.00
	B. W. Hunter, carpenter	36.00
	W. O. Wetzel, painter	52.00
	C. M Prather, watchman	33.75
	A. H. S. Burche, laborer	33.75
	J. F. Swiggard, laborer	26.25
	J. G Lee, laborer	33.75
	E. Wallingsford, laborer	27.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	13.23
Sept.	J. B. Bryan & Bro., groceries	944.56
	Woodward & Lothrop, dry goods	538.31
	S. Auth, fresh meat	296.29
	B. Rich & Son, shoes	147.14
	H. I. Gregory, stoves	120.00
	Myers & Loving, forage	119.10
	Scheller & Stevens, drugs	83.91
	J. C. Ergood, groceries	72.23
	H. I. Gregory, tin-ware	54.75
	W. F. Hewett, forage	48.10
	E. G. Wheeler, hardware	32.85
	Geo. J. Johnson, dry goods	9.70
	Chas. T. Carter, hardware	6.60
	Jackson & Co., groceries	6.69
	Henry Lyles, sand	6.40
	G. T. Dunlop, seed	5.58
	Thos. T. Keene, fresh meat	113.63
	Chas. E. Lyman, fresh meat, August	108.00
	Chas. E. Lyman, fresh meat, September	104.00
	Jas. L. Barbour & Son, groceries	234.26
	E. C. Gatchell, carpenter	72.00

1888.		
Sept.	B. W. Hunter, carpenter	$37.50
	W. O. Wetzel, painter	49.00
	C. M. Prather, watchman	21.25
	A. H. S. Burche, laborer	31.25
	J. F. Swiggard, laborer	31.25
	E. Wallingsford, laborer	25.00
	A. N. Thompson, laborer	19.50
	J. G. Lee, laborer	6.25
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	12.25
	W. H. Butler, paints	54.54
	J. S. Topham, harness, etc	9.50
	Lutz Bros., harness, etc	3.50
Oct.	J. B. Bryan & Bro., groceries	1,193.73
	S. Auth, fresh and corned meat	342.57
	Jas. L. Barbour & Son, groceries	257.43
	B. Rich & Son, shoes	140.84
	Myers & Loving, forage	120.71
	Geo. A. Shehan, lumber	106.59
	H. I. Gregory, tin-ware	89.75
	J. C. Ergood, groceries	74.75
	W. F. Hewett, forage	53.20
	Great Falls Ice Co., ice	38.97
	Geo. J. Johnson, dry goods	36.50
	E. G. Wheeler, hardware	27.04
	E. C. Gatchell, carpenter	78.00
	B. W. Hunter, carpenter	27.75
	W. O. Wetzel, painter	54.00
	C. M. Prather, watchman	33.75
	A. H. S. Burche, laborer	33.75
	J. F. Swiggard, laborer	33.75
	E. Wallingsford, laborer	27.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	13.23
Nov.	George J. Johnson dry goods	178.50
	Browning & Middleton, groceries	152.04
	W. F. Hewett, forage	53.70
	George T. Dunlop, seed	6.50
	Charles T. Carter, hardware	24.28
	Jackson & Co., groceries	16.35
	E. N. Gray & Co., repairs to boilers, etc	9.07
	W. J. C. Dulaney, cutlery	.50
	W. H. Butler, paints, oils, etc	53.57
	H. McShane & Co., engineer supplies	21.19
	H. McShane & Co., engineer supplies	1.68
	C. E. Lyman, fresh meat	108.00
	Cumberland Hydraulic Cement Company, cement	2.20
	Robert Cohen, shoes	13.20
	B. Rich & Son, shoes	135.60
	Bernard J. Iseman, leather	25.00
	Lansburgh Bro., dry goods	498.45
	Auerbach & Bro., men's underwear	138.00
	Myers & Loving, forage	119.10
	J. C. Ergood, groceries	71.88
	Scheller & Stevens, drugs	35.89
	J. E. Chapman, fuel	113.33
	Jackson & Co., marketing	25.00
	F. P. May & Co., hardware	23.47
	E. G. Wheeler, hardware	20.09
	Jackson & Co., poultry	17.50
	Robt. H. Johnson, poultry	13.00
	E. Morrison, stationery	3.42
	John McDermott & Bro., wagon material	2.00
	R. Harris, 1 clock	1.50
	J. B. Bryan & Bro., groceries	1,012.75
	Chas. E. Lyman, fresh meat	104.00
Dec.	Geo. J. Johnson, dry goods	170.87
	J. C. Ergood, groceries	74.75
	H. I. Gregory, stoves and iron ware	29.00

1888.		
Dec.	Bernard J. Iseman, leather	$25.00
	E. C. Gatchell, carpenter	75.00
	W. O. Wetzel, painter	50.00
	C. M. Prather, watchman	13.75
	A. H. S. Burche, laborer	32.50
	J. F. Swiggard, laborer	32.50
	E. Wallingsford, laborer	26.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	12.74
	S. R. Pennifill, female guard	9.00
	E. B. Hartley, skilled laborer	29.75
	George A. Shehan, lumber	55.15
	S. Auth, fresh and corned meat	338.13
	James L. Barbour & Son, groceries	269.39
	Woodward & Lothrop, dry goods	147.10
	B. Rich & Son, shoes	97.40
	J. W. Boteler & Son, dishes, tinware, etc	84.58
	Scheller & Stevens, drugs	71.12
	Scheller & Stevens, drugs	68.80
	W. F. Hewett, forage	53.70
	H. I. Gregory, stove and tinware	45.30
	Great Falls Ice Company, ice	43.23
	Jackson & Co., marketing	25.00
	Do	25.00
	W. Ballantyne & Son, stationery	21.58
	M. W. Beveridge, iron ware	13.72
	Jackson & Co., fruit	9.00
	Robert Leitch & Son, plumbers' material	9.00
	W. H. Butler, paints, glass, etc	67.24
	Great Falls Ice Company, ice	33.30
	Charles T. Carter, hardware	21.89
	Auerbach & Bro., men's socks	15.00
	F. P. May & Co., hardware	14.48
	H. W. Blunt, lime	4.90
	James L. Barbour & Son, groceries	279.73
	J. E. Chapman, fuel	49.86
	Z. D. Gilman, surgical instruments	19.50
	J. B. Bryan & Bro, groceries	1,071.06
	E. C. Gatchell, carpenter	75.00
	W. O. Wetzel, painter	50.00
	A H. S. Burche, laborer	5.00
	J. F. Swiggard, laborer	26.25
	E. Wallingsford, laborer	25.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	12.25
	S. W. Melson, skilled laborer	43.75
	W. Walker, laborer	15.00
	S. R. Pennifield, female guard	23.00
	Myers & Loving, forage	119.10
	E. G. Wheeler, hardware	78.70
	Thomas T. Keene, fresh meat	120.50
	C. E. Lyman, fresh meat	104.00
	Cannon & Chandler, fruit, etc	37.00
	Rabbit & Crown, poultry	78.71
	Jackson & Co., marketing	25.00
	H. McShane & Co., plumbers' material	35.30
	H. McShane & Co., plumbers' materials	18.44
1889.		
Jan.	Frank Hume, groceries	152.49
	B. Rich & Son, shoes	140.54
	George J. Johnson, dry goods	134.52
	W. F. Hewett, forage	53.70
	Auerbach & Bros., men's hose	15.00
	Willet & Libbey, lumber	12.38
	E. G. Wheeler, hardware	8.94
	S. Auth, fresh and corned meat	330.29
	Scheller & Stevens, drugs	85.64
	Great Falls Ice Company, ice	21.15
	William Ballantyne, stationery	20.55

1889.		
Jan.	E. G. Wheeler, saddlery	$10.00
	Robert Cohen, shoes	7.20
	W. H. Douglass, repairs to pump	10.00
	W. B. Moses, furniture	24.70
	E. Morrison, stationery	.84
	Myers & Loving, forage	119.10
	J. E. Ergood, groceries	91.90
	J. C. Dulaney, stationery	1.58
	J. B. Bryan, groceries	1,100.13
	J. W. Muse, printing	.45
	E. C. Gatchell, carpenter	78.00
	W. O. Wetzel, painter	52.00
	S. W. Melson, skilled laborer	45.50
	C. S. Prather, watchman	38.75
	E. Wallingsford, laborer	27.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	13.23
	W. Walker, laborer	33.75
	J. F. Swiggard, laborer	7.50
	Jas. L. Barbour & Son, groceries	528.28
	B. Rich & Son, shoes	143.78
	W. F. Hewett, forage	53.70
	Henry Lyles, sand	6.00
	Robert Beall	2.25
	Jackson & Co., marketing	25.00
	S. Auth, fresh and corned meat	359.97
	Chas. E. Lyman, fresh meat	108.00
	Myers & Loving, forage	119.10
	Auerbach & Bro., men's underwear	69.00
	E. G. Wheeler, hardware	12.90
	Wm. Wood & Co., Medical Journal	8.00
	Philadelphia Medical Times	2.00
	C. Auerbach, sewing-machine supplies	1.45
	Willet & Libbey, lumber	24.75
	J. B. Bryan & Bro., groceries	1,097.87
	Great Falls Ice Company, ice	20.10
	Henry McShane, plumbers' material	14.21
	E. N. Gray, repairs to boiler	56.28
	W. H. Butler, paints, glass, etc	38.91
	F. C. May & Co., hardware	54.03
	Browning & Middleton, groceries	102.54
	Scheller & Stevens, drugs	70.54
	H. J. Gregory, stove repairs, etc	41.50
	George J. Johnson, dry goods	22.00
	E. C. Gatchell, carpenter	60.00
	W. O. Wetzel, painter	46.00
	S. W. Melson, skilled laborer	40.25
	C. S. Prather, watchman	35.00
	W. Walker, laborer	21.25
	H. A. Barbee, laborer	20.00
	J. F. Dandelet, laborer	16.25
	E. Wallingsford, laborer	24.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	11.76
Mar.	W. F. Hewett, forage	53.70
	Government Printing Office, printing	7.09
	B. Rich & Son, shoes	108.20
	E.G. Wheeler, hardware	22.63
	J. E. Chapman, fuel	116.11
	Charles E. Lyman, fresh meat	96.00
	William Ballantyne, stationery	16.20
	Tschiffely & Evans, combs, labels, etc	17.20
	J. W. Muse, blank forms	3.15
	S. Auth, fresh and corned meat	335.52
	J. L. Barbour & Son, groceries	241.90
	George J. Johnson, dry goods	44.25
	W. J. C. Dulaney, stationery	1.00
	G. C. Dunlop, seed	63.25
	Woodward & Lothrop, dry goods	184.85

1889.		
Mar.	J. C. Ergood, groceries	$158.12
	Great Falls Ice Company, ice	20.25
	J. B. Kendell, wagon material	33.97
	Lansburgh Bro	238.79
	Myers & Loving, forage	140.22
	H. I. Gregory, stove grates	4.50
	W. H. Butler, glue	1.80
	Jackson & Co., marketing	25.00
	J. B. Bryan & Bro., groceries	1,050.05
	E. F. Street, disinfectant	3.50
	E. C. Gatchell, carpenter	72.00
	W. O. Wetzel, painter	44.00
	S. W. Melson, skilled laborer	43.75
	C. S. Prather, watchman	38.75
	W. Walker, laborer	15.00
	H. A. Barbee, laborer	33.50
	J. F. Dandelet, laborer	32.50
	A. H. S. Burche, laborer	15.00
	E. Wallingsford, laborer	24.00
	T. Reardon, tailor	15.00
	H. Heynich, herdsman	12.74
	James L. Barbour & Son, groceries	13.55
	Lewis Baar, repairs to sewing-machine	6.01
	S. Auth, fresh and corned meat	369.64
	Scheller & Stevens, drugs	55.32
	Great Falls Ice Company, ice	23.40
Apr.	H. I. Gregory, charcoal, stove-fixtures, etc	21.25
	H. Oppenheimer, meat block	4.00
	Charles E. Lyman, fresh meat	104.00
	Jackson & Co., marketing	25.00
	Jackson & Co., canned goods	3.30
	B. Rich & Son, shoes	161.96
	Myers & Loving, forage	139.72
	George J. Johnson, dry goods	49.50
	J. E. Chapman, fuel	48.75
	W. F. Hewett, forage	48.10
	E. G. Wheeler, hardware	19.90
	H. H. Hempler, repairs to surgical instruments	16.20
	B. J. Iseman, leather	25.00
	F. P. May, hardware	4.94
	W. B. Moses, house-furnishing	5.75
	George A. Shehan, lumber	39.06
	M. W. Beveridge, tin and iron ware	15.60
	R. A. Golden, fresh fish	17.00
	Scheller & Stevens, drugs	66.39
	E. G. Wheeler, trace-chains	11.50
	H. W. Blunt, lime	14.70
	R. A. Golden, fresh fish	15.00
	Jackson & Co., groceries	14.50
	J. B. Bryan, groceries	920.17
	J. W. Boteler, crockery, etc	96.21
	E. C. Gatchell, carpenter	75.00
	W. O. Wetzel, painter	52.00
	C. S. Prather, watchman	37.50
	H. A. Barbee, laborer	6.88
	J. F. Dandelet, laborer	32.50
	A. H. S. Burche, laborer	32.50
	E. Wallingsford, laborer	26.00
	T. Reardon, tailor	25.00
	H. Heynich, herdsman	12.74
	S. Auth, fresh and corned meat	351.63
	W. H. Butler, paints, etc	13.18
	R. A. Golden, fresh fish	65.00
May	J. C. Ergood, groceries	181.47
	W. F. Hewett, forage	48.10
	E. G. Wheeler, hardware	18.56
	Jackson & Co., canned goods	4.95
	Geo. J. Johnson, dry goods	24.76
	Lutz & Bro., repairs to harness	10.75

1889.		
May.	Great Falls Ice Company, ice	$22.05
	C. E. Lyman, fresh meat	120.00
	H. McShane, plumbers' supplies	54.64
	William Ballantyne, stationery	26.43
	Woodward & Lothrop, dry goods	21.95
	Jas. L. Barbour & Son, groceries	421.81
	Scheller & Stevens, drugs	41.35
	Myers & Loving, forage	138.25
	Z. D. Gilman, surgical instruments	33.55
	Jackson & Co., marketing	25.00
	F. P. May, hardware	27.44
	W. B. Moses, mattresses	36.54
	Lansburgh Bro., dry goods	74.31
	Browning & Middleton, groceries	91.25
	George White & Son, car tables	43.94
	Charles T. Carter, wash-boards	.75
	J. B. Bryan & Bro., groceries	1,011.06
	B. Rich & Son, shoes	95.54
	J. W. Boteler & Son, dishes and cutlery	54.25
	Frank Hume, groceries	53.10
	George A. Shehan, lumber	32.02
	Charles E. Lyman, fresh meat	124.00
	E. H. Jones, fruit-trees	15.00
	E. C. Gatchell, carpenter	78.00
	W. O. Wetzel, painter	52.00
	C. S. Prather, watchman	38.75
	A. H. S. Burche, laborer	7.50
	E. Wallingsford, laborer	31.00
	T. Reardon, tailor	25.00
	W. E. Howard, dairyman	20.15
	S. Auth, fresh and corned meat	347.71
	Jackson & Co., marketing	25.00
June.	B. Rich & Sons, shoes	64.56
	W. F. Hewett, forage	53.80
	Jackson & Co., canned goods	4.95
	Great Falls Ice Co., ice	26.70
	J. C. Ergood, groceries	57.50
	Scheller & Stevens, drugs	25.03
	George J. Johnson, dry goods	21.06
	E. G. Wheeler, hardware	6.42
	Charles T. Carter, hardware	4.20
	R. Leitch & Son, terra-cotta pipe	3.03
	J. B. Bryan & Bro., groceries	1,039.56
	Myers & Loving, forage	77.42
	Z. D. Gilman, surgical instruments	7.00
	H. I. Gregory, tinware	6.17
	E. Morrison, stationery	.84
	E. C. Gatchell, carpenter	75.00
	W. O. Wetzel, painter	46.00
	C. S. Prather, watchman	37.50
	E. Wallingsford, laborer	30.00
	T. Reardon, tailor	25.00
	W. E. Howard, dairyman	19.50
	T. Urban, gardener	15.00
	William Ballantyne & Son, stationery	1.00
	James L. Barbour & Son, groceries	235.49
	Great Falls Ice Company, ice	31.74
	Cumberland Hydraulic Cement Company, cement	2.19
	S. Auth, fresh and corned meat	321.44
	Chas. E. Lyman, fresh meat	100.00
	Jackson & Co., marketing	25.00
	Thos. T. Keene, fresh meat	172.00
	F. P. May & Co., hardware	8.66
	R. A. Golden, fresh fish	12.50
	W. H. Butler, turpentine	.90
	M. W. Beveridge, ice-chest	13.60
	John A. Baker, agricultural supplies	4.00
	Browning & Middleton, groceries	28.43
	H. W. Blunt, lime	1.96

1889.	
June. Lansburgh & Bro., dry goods	$30.36
Frank Hume, groceries	11.34
Washington Gas-Light Company, gas—	
July, 1888	14.38
August, 1888	17.14
September, 1888	24.77
October, 1888	48.26
November, 1888	67.14
December, 1888	93.01
January, 1889	108.77
February, 1889	75.90
March, 1889	63.02
April, 1889	54.26
May, 1889	37.14
June, 1889	34.27
Total	39,987.55

The appropriation for the past year for the support of the institution was as follows:

For contingent expenses	$40,000.00	
Expended	39,987.55	
Unexpended balance		$12.45
For salaries	13,415.00	
Expended	13,276.60	
Unexpended balance		138.40
For new kitchen	2,500.00	
Expended	2,475.00	
Unexpended balance		25.00
For fire-escape at almshouse	600.00	
Expended	598.60	
Unexpended balance		1.40
For introducing gas to almshouse	300.00	
Expended	297.28	
Unexpended balance		2.72
Total unexpended		179.97

Cost per capita:	
With attendance	98.63
Without attendance	67.36

WASHINGTON ASYLUM HOSPITAL, 1889.

SIR: Owing to the long illness and death of Dr. Howard, our visiting physician, I have the honor to submit the following annual report of the Washington Asylum Hospital for the year ending June 30, 1889:

Number admitted from June 30, 1888, to July, 1889	445
Number of births	31
Remaining in hospital June 30, 1888	80
Total	556
Number discharged from July 1, 1888, to June 30, 1889	421
Number of deaths	61
Remaining in hospital June 30, 1889	67
Still-births	7
Total	556

White males	201
White females	94
Total white	295
Colored males	149
Colored females	112
Total colored	261

NATIVITY.

District of Columbia	148	Arkansas	1
Virginia	128	Georgia	1
Maryland	100	New Jersey	1
New York	16	At large	2
Pennsylvania	15	Ireland	82
Massachusetts	7	Germany	18
Illinois	3	England	11
North Carolina	3	Switzerland	2
Ohio	3	West Indies	2
Mississippi	2	France	1
Connecticut	2	Sweden	1
West Virginia	2	Holland	1
South Carolina	2		
Kentucky	1	Total	556
Iowa	1		

CAUSE OF DEATH.

Senile debility	20	Syphilis	1
Phthisis	5	Pneumonia	1
Entero colitis	4	Hydropericardium	1
Pyæmia	3	Congenital debility	1
Congestion of lungs	3	Hemiplegia	1
Asthma	3	Cancer of bladder	1
Diarrhea	2	Paralysis	1
Infantile debility	1	Cancer of tongue	1
Senile dementia	1	Dysentery	1
Epilepsy	1	Peritonitis	1
Tuberculosis	1	Valvular disease	1
Typhoid fever	1	Pyelitis	1
Bright's disease	1	Unknown	1
Chronic diarrhea	1		
Cirrhosis of liver	1	Total	61

In submitting the annual report I desire to call attention to the necessity of building a new ward for the white males; the one in use being an old condemned school-house, is entirely unsuited for that purpose.

I would also earnestly recommend an appropriation for a new lying-in ward. We are now forced to use one wing of the white female ward, and find it very inconvenient in many respects.

The sanitary condition of the almshouse and prison has been as good as could be expected considering the generally crowded condition of these departments.

Respectfully,

CHAS. K. KOONES,
Resident Physician, Washington Asylum.

Mr. W. H. STOUTENBURGH,
Intendant Washington Asylum.

WASHINGTON ASYLUM,
Washington, D. C., September 5, 1889.

GENTLEMEN: In reference to inquiry of August 31, as to whether "suitable rooms can be furnished in the asylum for the temporary care of persons alleged to be insane," I beg leave to say that the institution is without one room fit for such purpose, and that we have been driven to the extremity of even placing the violent cases that have occurred here in the punishment cells in the male work-house, for the safety of the patient and of the other inmates.

The confinement of this class of persons should not be more than two days preceding a trial, and if several thousand dollars expense must be incurred to properly fit up a place for their proper confinement, such place should be near the trial court.

There is a building at the naval magazine in these grounds that could be converted at small expense into very suitable quarters for such cases, the outside walls, roof, and floors being substantial and in good condition. The building is one story and large enough to cut up into eight or ten small rooms and cross hall on one floor. Two sections of four small rooms each, divided by three-eighths wire netting, could easily be warmed, ventilated, and guarded. The expense of converting the building in its present condition into eight apartments and guard-room would be about $2,500. Some suitable quarters for this class of patients is badly needed by the institution, as many troublesome cases are brought or develop here.

Very respectfully,

W. H. STOUTENBURGH,
Intendant Washington Asylum.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

DEPARTMENT OF METROPOLITAN POLICE,
Washington, D. C., August 20, 1889.

GENTLEMEN: I have the honor to call your attention to the fact that the commitments to the Government Hospital for the Insane by this department during the fiscal year just closed numbered 143. In previous annual reports I have called attention to the embarrassment occasioned this department by the delays attending jury trials in such cases. The dangerously insane, pending trial, are confined in a station-house, the cells of which are merely intended "for the temporary detention of persons arrested for offenses," or until they can be brought before the police court, which, except Sundays, has daily sessions. It not infrequently happens that an insane person, charged with no offense, is confined in a cell several days, during which time he requires constant watching, lest he may do himself violence, and is furnished meals at the expense of this department.

Humanity demands that more suitable accommodations should be provided for the comfort and safe-keeping of these unfortunate persons prior to and during the necessary proceedings to determine their sanity, and I therefore beg to inquire if there is not some building under your control which could be properly arranged for their reception and temporary care?

Very respectfully,

W. G. MOORE,
Major and Superintendent Metropolitan Police.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

DISTRICT OF COLUMBIA,
OFFICE OF INSPECTOR OF BUILDINGS,
Washington, D. C., September 25, 1889.

GENTLEMEN: As directed by you to furnish an estimate for raising two stories on the magazine building south of the present female work-house, and fitting it for an additional work-house for females, I have the honor to report that in the construction of the building for the purpose it will be necessary to add to the north side a building of sufficient dimensions for entrance and stairways and reconstruct the interior sufficient to carry the walls for cells, and in the second and third stories to divide it into individual cells. I estimate the entire job, including heating the building, to cost the sum of $20,000.

Very respectfully,

THOS. B. ENTWISLE,
Inspector of Buildings.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

WASHINGTON ASYLUM,
Washington, D. C., July 25, 1889.

GENTLEMEN: I have the honor to request permission to convert magazine building No. 2 (now unused) into an additional ward suitable for habitation by the male inmates of this institution (other than prisoners), at an estimated cost of $500, to be paid from the contingent fund of the asylum, labor to be done by the work-house gang as far as practicable. The alterations required consist of the construction of windows, chimneys, partial flooring, plastering, and the introduction of water, which, when completed, will furnish comfortable quarters for thirty people.

This additional accommodation is absolutely necessary.

Very respectfully,

W. H. STOUTENBURGH,
Intendant Washington Asylum.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 2.

THE REFORM SCHOOL.

REPORT OF THE BOARD OF TRUSTEES OF THE REFORM SCHOOL.

REFORM SCHOOL OF THE DISTRICT OF COLUMBIA,
Washington, D. C., October 1, 1889.

GENTLEMEN: In compliance with law, I respectfully submit herewith the twentieth annual report of the trustees of the Reform School of the District of Columbia.

The school was organized nearly twenty-one years ago, and from that time down to and including the 30th of June last there have been received 1,386 boys. On the first day of the last fiscal year there were 155 boys in the school. During the fiscal year ending June 30, 1889, 84 boys were received, making during the year a total of 239 boys.

Of boys received during the year, 9 were committed by the supreme court of the District of Columbia, 49 by the police court, and 26 by the president of the board of trustees. Eighty were received upon first commitment and 4 upon second commitment. The average age of the boys was twelve and a half years. The oldest boy received was sixteen years of age, the youngest eight years.

For further detailed information respecting the boys, your attention is respectfully invited to the report of the superintendent herewith submitted.

No deaths have occurred at the school for over two years and from the time the school was organized until now but nine deaths have occurred out of a population of 1,386, covering a period of nearly twenty-one years. This of itself speaks well for the care and attention the boys receive. They have—though plain—the very best food in abundance, and the best medical treatment when they are sick. Fortunately, but few cases of sickness occur, and generally when they do occur they are of a mild type and readily yield to treatment.

As to the health and sanitary condition of the school, your attention is respectfully invited to the report of the physician, Dr. Wells.

Forty-nine boys were discharged during the year. It is a rule of the board of trustees not to discharge a boy unless he has a proper home to return to, and where a boy has earned his discharge by his good conduct, if he has no suitable home, every exertion is made by the superintendent and the trustees to find a home and employment. As a rule, boys on leaving the school readily find employment and conduct themselves well.

Many instances have been brought to the attention of the board of discharged boys holding positions of trust and responsibility in this and other cities, and, with very few exceptions, whenever they hear of discharged boys they learn that they are doing well. The training that they receive at the school fits them for the battle of life. They are sent out well equipped to make their way in the world and to become useful and honorable citizens, and it is the pride and pleasure of the trustees to point to the honorable and creditable career of a large majority of the boys who have been under their control and management.

Some other industries should be introduced in the school. For many years past the trustees contracted with a firm in another city for caning seats of chairs; this gave occupation to from thirty to fifty boys, but the contract expired some months ago and could not be renewed. An appropriation of $3,000 is asked for the purchase of necessary machinery, etc.

A committee of the trustees have recently inspected several of the larger institutions, with a view of ascertaining the best means of not only giving the boys employment, but of teaching them an occupation which will be useful to them in their future lives. In their report they recommend that as little machinery as possible be used, and that no trades be taught which will require the use of it to any great extent; for the reason that when the inmates leave the school they must to a great extent depend upon their own hands and they should be taught to work without the aid of machinery.

They recommend that the shoe-shop and tailor-shop be largely increased, and that all the shoes be made required at the school, and all the clothing be made; and, if possible, work be obtained for the tailor-shop from clothing establishments in this and other cities.

They further recommend that the trades of brick-laying, plastering, and carpentering be taught, and that skilled mechanics be employed to teach the boys these trades.

After the boys become proficient in these trades they can do a

large amount of work on the premises which now has to be done by others at a considerable expense to the school, and by employing the boys in this way the expense will be saved.

The house of refuge in Philadelphia is one of the oldest institutions in the country and is a walled institution, but the managers have come to the conclusion that open institutions, similar to ours, are better in every way, and have purchased a farm of about 400 acres near that city, at a cost of over $50,000, and there has been appropriated the sum of $750,000 for the erection of buildings; thus showing the importance the State of Pennsylvania places upon the necessity of the reformation and education of this class of boys.

Your attention is respectfully invited to the report of the committee, which is hereto appended.

Estimates of appropriations for expenses of the school for the next year have been submitted to you and to the honorable Attorney-General, as follows:

For salaries:	
One superintendent	$1,500
One assistant superintendent	900
Six teachers and assistant teachers	4,050
One matron of school	600
Three matrons of families, each $180	540
Three foremen of workshops	1,980
One farmer	480
One engineer	396
One assistant engineer	300
One baker	360
One cook, one shoemaker, and one tailor, $300 each	900
Two dining-room servants, one seamstress, and one chambermaid, $144 each	576
One laundress	180
One florist	360
Watchmen, not exceeding seven in number	1,620
Secretary and treasurer, board of trustees	600
In all	15,342
For support of inmates, including groceries, flour, feed, meats, dry goods, leather and shoes, gas, fuel, hardware, tableware, furniture, farm implements and seeds, harness, and repairs to same, fertilizers, books, stationery, plumbing, painting and glazing, medicines, medical attendance, stock, fencing, repairs to buildings, and other necessary items, including compensation, not exceeding $900, for additional labor or services, and for transportation and other necessary expenses incident to securing suitable homes for discharged boys, not exceeding $500, all under the control of the Commissioners	26,000
For buildings and improvements:	
Permanent improvement of roadways and approaches, including grading and draining	3,000
Permanent boiler-house, of brick	2,500
One 100-horse power boiler for steam-heating and connections	1,500
Steam-fitting and steam-pipes to old family building, radiators and connections	1,500
Purchase of machinery, tools, and fixtures, and for incidental expenses in establishing new mechanical industries, or so much thereof as may be necessary	3,000
Two brick water-closets for use of main building and "A" family building	2,000
Painting buildings, including barn	1,000
Proceeds of farm and shops to be covered back into the Treasury to be divided equally between the District of Columbia and the United States.	
To defray expenses of a representative of the Reform School of the District of Columbia at the International Prison Reform Congress to be held at St. Petersburg, Russia, or so much thereof as may be necessary.	750
In all	15,250

This appropriation to be available at once.

You will perceive that an increase has been asked for pay of teachers and assistant teachers and watchmen. This increase is necessary from the fact that the additional family building has been completed recently, giving the school a capacity of fifty more boys than it has heretofore had, requiring, therefore, more teachers and watchmen. Foremen of workshops will be required in instructing the boys in the new industries to be introduced.

The estimate for support of inmates is the same as for the present fiscal year.

An appropriation of $3,000 is asked for permanent improvement of roadways and approaches, including grading and draining. During the past season, owing to the heavy rains, the roads have been badly washed, which will require repairing at a considerable expense. A great deal of the land should be thoroughly drained to make it more productive, and much heavy grading is required to put the ground in thorough order and to make a proper play-ground for the boys.

It will be remembered that there are nearly 200 boys in the school, and recreation after their daily tasks are completed is necessary for their health and happiness. The physician in his report earnestly recommends a thorough system of permanent drainage for all the buildings and grounds as most necessary to the comfort and health of all upon the premises.

An appropriation has heretofore been asked to enable the trustees to fit up a proper play-ground, but it has never been made.

An appropriation of $3,000 is asked for a permanent boiler-house of brick. Heretofore the boilers have been in the several buildings, but now they have been taken out and placed at some distance from the buildings, and steam conveyed by connecting pipes underground. This is not only more satisfactory, but avoids any possibility of danger from explosion of the boilers. The boilers are now protected by a temporary frame shed, which is in a dilapidated condition. If this appropriation is made, no more expense of this kind will have to be incurred. Another boiler is also necessary to complete this system of heating, and an additional appropriation of $1,500 is, therefore, asked. Also an appropriation of $1,500 is asked for the steam heating and steam pipes for the old family building, to be properly connected. The physician in his report places great stress upon the importance of these improvements at once.

An appropriation of $3,000, as before mentioned, is asked for the purchase of machinery, tools, benches, etc., and for the necessary expenses of establishing new mechanical industries. This appropriation will not only enable us to teach the boys useful occupations, but will add materially to the revenues of the school. You are aware that all revenue derived from the school is covered into the Treasury and equally divided between the District of Columbia and the United States.

The closets for the use of the main and old family building are in a dilapidated condition. They are eye-sores and should not be permitted to remain, and an appropriation of $2,000 is asked for two brick water-closets. As to the necessity for these closets from a sanitary standpoint, attention is respectfully invited to the report of the physician, herewith submitted.

An international prison reform congress is to be held at St. Petersburg, Russia, during the coming summer. This is not only a congress, but also an exposition. The trustees are desirous of having a delegate to represent the school. Our school is the only school of its kind in the United States under the control of the General Government, and it appears meet and proper that it should be represented at this great meet-

ing, where, it is understood, nearly every institution of a similar character in the world will be represented. An appropriation for this purpose of $750 is asked. This will be money well expended, as the representative of the school can visit similar institutions, study their workings, and, doubtless from his observations, be able to introduce many reforms and improvements in our school. It is the intention of the board of trustees to make a full display at this congress of the handiwork of the boys. No expense will attend this, as the congress defrays all such expenses.

For the service of the last fiscal year there was appropriated as follows:

Salaries	$12,596.00
Support of inmates	26,000.00
In all	38,596.00
Total disbursements	38,496.85
Unexpended balance	99.15
Brick water-closets	1,200.00
Total disbursements	998.00
Balance unexpended	202.00
Addition to hog-pen	150.00
Total disbursements	137 24
Balance unexpended	12.76
Grading, draining, and improving grounds	300.00
Total disbursements	285.40
Balance unexpended	14.60
Boiler-house, boilers, piping, and connections	4,000.00
Total disbursements	3,576.46
Balance unexpended	423.54

Summary of disbursements on account of current expenses during year ended June 30, 1889.

Appropriated for—		
Salaries		$12,596.00
Support, etc		26,000.00
Total appropriated		38,596.00
Disbursements:		
Pay roll account	$11,898.41	
Secretary and treasurer	600.00	
	$12,498.41	
Groceries	5,628 74	
Flour	2,887.08	
Fresh meats	2,083.20	
Dry goods, clothing, hats, etc	2,448.83	
Leather and shoes	566 80	
Gas and fuel	3,708.26	
Hardware, tableware, and houseware	381.45	
Furniture	625.19	
Farm tools, fertilizers, seeds, harness and repairs to same	1,814.17	
Books and stationery	308.07	
Repairs to buildings, including plumbing, painting and glazing	2,641.75	
Medicines and medical attendance	582.74	
Purchase of farm stock	966.00	
Sundry incidental expenses	737.66	
Compensation for additional labor and services	618.50	
Total		38,496.85
Leaving an unexpended balance of		99.15

There was received by the treasurer from the superintendent, during the fiscal year, the sum of $3,143.40, derived from work of the boys and other sources, which was covered into the Treasury, one-half to the credit of the United States and one-half to the credit of the District of Columbia.

Your attention is respectfully invited to the report of the treasurer herewith, showing in detail the expenditures made during the past fiscal year.

During the past year, since the new family building was completed, the smaller boys have been separated from the larger. This is a great improvement. They are kept by themselves, and are located in the main building, directly under the eyes of the superintendent and matron. This change works more than well. The smaller boys are thus removed from many evil influences of the larger boys, and are where they are constantly under the immediate charge of the superintendent and matron.

In institutions of this character, long experience teaches us that boys should be separated as much as possible, the larger from the smaller, and each family kept as small in numbers as can conveniently be done. No family should exceed fifty in number, and even this number is too large.

We have now three family buildings and each building should be limited to not exceeding fifty boys, but at times we have had as high as two hundred inmates in the school, causing an increase in the size of the families and crowding the dormitories and school-rooms. It is not the intention of the board at present to ask for any additional family buildings, although another could be well utilized.

Under the law, as president of the board, I have on several occasions during the past year been forced to notify the courts to stop committing boys to the school, on account of its crowded condition. This works a great hardship, and boys of tender years who should have been at the school have been sent to the work-house. Recently my attention was called by you to the fact that a large number of small boys were at the work-house and working in the chain-gang, the very worst possible use they could be put to or place they could be sent. Although the school was crowded I made arrangements to have these boys transferred to the school as a matter of humanity and duty. A few days at such a place as the work-house, associating with old and confirmed criminals, soon hardens them and makes them criminals for life. A dollar spent in the prevention of crime is worth thousands spent in its prosecution, to say nothing of the moral aspect of the case.

It may be said, it is true, that reformation is not worked in every case, or, if worked, is not always permanent. This may be true, but if only a small percentage of those who leave the school turn out well, it is that much gained. But we are safe in saying that a very large percentage turn out well and become useful and upright citizens, doing themselves and their instructors great credit. It is almost impossible for the members of the board to walk about the streets without daily meeting many of the discharged boys, and with rare exceptions they are at work, bright and cheerful, and all appear to be doing well.

Attention is respectfully invited to the report of the attending physician, Dr. Charles A. Wells, and to the report of the superintendent, herewith submitted.

On account of the extraordinarily wet weather during the past season, a great amount of extra work has been required of the larger boys. This work consisted of draining, making roadways, and working upon

the farm. The wet weather made it necessary in some instances to plant the crop three times, and I regret to say that, owing to this, our crops will be small and of poor quality this season. It is, however, thought and believed that they will be sufficient to meet all the needs of the school, or nearly so.

It is to be regretted that the bill introduced last session giving the trustees the right to recall any discharged boy during his minority who in their opinion was without a proper home, or for other and sufficient reasons, failed to become a law. In most of the States such a law exists, and from extended inquiry I have learned that it works well and has a most beneficial and restraining effect, and it is earnestly hoped that the honorable Attorney-General will again invite the attention of Congress to this matter and recommend the passage of the law.

There have been but few changes among the employés of the school during the past fiscal year, and those only of minor importance.

The officers have discharged their duties faithfully and well.

No one except those who are familiar with the workings of an institution like this can be aware of the trying and difficult task they have always before them. Their duties are never at an end, and from morning until night they must be watchful and vigilant, and the trustees take great pleasure in commending them for the faithful discharge of the trusts imposed upon them.

Very respectfully,

A. J. FALLS,
President of the Board.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF THE SUPERINTENDENT.

REFORM SCHOOL OF THE DISTRICT OF COLUMBIA,
October 1, 1889.

GENTLEMEN: I have the honor to present herewith my annual report for the fiscal year ending June 30, 1889.

Our school records furnish the official statements and statistical information that hereinafter follow, viz:

Total number received since opening		1,386
Total number of deaths since opening		9
Rate of mortality, five-eighths of 1 per cent.		
Average age of boys received since opening	years..	13
Age of oldest boy when received	do...	16
Age of youngest boy when received	do...	8
Number of boys in institution June 30, 1888		155
Received during the year as follows:		
From supreme court District of Columbia	9	
From the police court	49	
From president of the board	26	
		84
Total population during the year		239
Number received on first commitment		80
Number received on second commitment		4
		84
Average age of boys received during the year	years..	12.6

Maximum number during the year	186
Minimum number during the year	151
Average number during the year	172
Number of boys discharged during the year, viz:	
By order of the board of trustees	45
By change of sentence police court	4
By escape and still absent	5
	54
Number remaining June 30, 1889	185
Shortest time for discharge on "honor badge" ..... months	19
Nativity of boys received during the year, viz:	
American	71
Irish	6
German	5
Italian	1
Bohemian	1
	84
Cause of commitment, viz:	
Incorrigibility	46
Larceny	22
Vagrancy	8
Assault	1
House-breaking	5
Disorderly assembly	2
	84
Parental relations of boys received during the year, viz:	
Number having both parents living	44
Number having lost father by death	21
Number having lost mother by death	13
Number having lost both parents by death	6
Number having parents living in separation	4
Number having step-father	9
Number having step-mother	3
Religious training of boys prior to commitment, viz:	
Baptist	26
Catholic	15
Episcopalian	7
Methodist	23
Presbyterian	1
Congregationalist	1
Hebrew	1
No early religious training	10
	84
Educational grade when received, viz:	
Number who did not know the alphabet	8
Number who knew the alphabet only	14
Number who could spell in one syllable	2
Number who could read primary lessons	30
Number who could read tolerably well	18
Number who could read well	12
	84
Number who could not write	34
Number who could write indifferently	23
Number who could write legibly	13
Number who could write well	14
	84

Number who had not studied arithmetic	68
Number advanced in multiplication	2
Number advanced to long division	3
Number advanced to fractions	11
	84

FINANCIAL STATEMENT.

The superintendent has received from various sources, and turned the same over to Samuel W. Curriden, treasurer of the school, who has covered the same into the United States Treasury to the benefit of the United States and the District of Columbia jointly, as follows, viz:

Cash received from chair-shop account	$1,702.47
Cash received from farm products	443.73
Cash received from green-house account	667.51
Cash received from paper-box account	257.67
Cash received from miscellaneous sources	72.03
Total	3,143.41

Another year of active school life and work has passed into the domain of history.

In addition to facts already stated in figures and other information tabulated for convenient reference, I will further direct your attention as briefly as possible to what has been accomplished in the past, and notice some of our most pressing wants for the coming fiscal year.

Much of our school work is necessarily monotonous. The events and occurrences of each succeeding day may differ somewhat from its predecessors, but they all bring with them a round of duties and responsibilities essentially the same. These conditions naturally tend to formulate a routine for the work of each succeeding year, which will explain, and in a measure excuse, much that is required in these official records from year to year. This does not imply, however, that our work is not in the highest sense progressive. We claim, in fact, this higher condition for the school in the year just closed—the twentieth in its history and the eighth in which the writer has been honored with your confidence and favor in its executive control.

It is only a pleasant duty, although seemingly monotonous, to speak of this good work, so vital in its interests to hundreds of deserving boys, and of what it has accomplished in their behalf; but especially is this true when spoken concerning the numbers you have honorably discharged, for we certainly know that a large proportion of them are well and permanently located in business of their own, or employed profitably by others, and that they are making a creditable record both for themselves and the school in their now widely separated homes.

These facts are named in this connection, as they stand in evidence that the aims of the institution are being steadily and surely accomplished, and that your efforts in behalf of these boys---many of them otherwise homeless and dependent—have resulted in lasting good to themselves as individuals, to society, of which they must form a part, and to the nation, that may safely claim them as citizens. Much must depend, as to the future of these boys, upon the character of the homes they go to after their final discharge; and still more, perhaps, upon their success in procuring ready and suitable employment. This latter is not always possible, however, and often because you are not provided with the necessary means for instructing them in some useful trade or occupation while inmates of the school.

If there be truth in the adage "An idle brain is the devil's work-

shop," then it must follow that idle hands are the ready tools with which he works. Honest employment of some kind must ever be considered a great incentive to well doing. It is healthful exercise for both brain and muscle, hence children should be early taught to labor judiciously with both.

Few take to it naturally or accept even its lighter burdens from choice, but the twig being once bent, and the habit thus established, the one must become a law as binding upon the matured child as will the other upon the full-grown tree.

This leads to the fair conclusion that our boys should all be taught to work, and, when possible, to work intelligently; that when of suitable age they should be educated in the skillful use of mechanical tools and other appliances commonly used in the constructive arts. It means, in a word, that they should be taught some useful trade, as skilled labor is always in demand and always remunerative. Many of our boys are not only capable of learning but willing and anxious to take advantage of such an opportunity, even if required to remain a longer time in the school. These suggestions are offered as an open and earnest petition in their behalf. The appeal is to you, trusting that in the exercise of your personal and official influence with those whose still higher privilege it is to grant the requisite means you may soon be enabled to establish a line of practical industries in this institution, itself a ward of the nation, an only child, in fact, and one not unworthy of its fostering care.

I have been led to make this appeal for Congressional aid in this special direction more urgent than ever before on account of our recent failure to renew a long-standing contract for chair-caning, which expired at the close of the present fiscal year. I do not favor this class of work except perhaps for the smaller boys, and then only because it serves to keep them employed a portion of their time at light labor and without strain or detriment to health. The work in itself can not be classed as a profitable trade or calling. It may become possible in the near future to substitute for this some other light work, such as the making of cheap wooden toys or knitting in cotton or wool. Meanwhile there is a ready alternative, as the former hours for work can be profitably spent in the school-room. This must of course cause a marked reduction in our moneyed income until remunerative labor of some kind has been secured.

As to our older boys, we can always find more than enough to keep them busy, except perhaps during the extremes of winter weather, when they can not be employed to profit in the open air. Our large farm makes a very extensive workshop, and large enough to accommodate in this way double the amount of muscle at our command. During the present year, as indeed ever since the farm was first occupied by the school, it has required heroic treatment, including more than a meager annual expenditure, in efforts to reclaim portions of its worn and wasted soil.

This has proved an exceptionally trying year to the farmer, requiring more than its average share of labor and expenditure, occasioned by almost continuous rain-storms throughout the entire planting season, and often necessitating a triple quantity of seed to supply losses entailed by these destructive floods.

But during all these years, in addition to the customary farm work, an amount of manual labor not readily calculated in dollars and cents has been required and expended annually. This will include the construction and repair of roadways, opening up and preparing new grounds for tillage, making and repairing fences, planting and cultivat-

ing orchards, excavating for foundations of new buildings, laying new and extending old lines of sewerage, together with ditching and paving for surface drainage, and, where required, piping for subdrainage of grounds. Large bodies of surplus earth have been broken up and removed from unsightly hills to fill and level still more unsightly hollows, until many localities have been virtually transformed and made serviceable as well as attractive to the eye, by thus securing suitable grades and covering the new-made surface with shrubs and grasses. Work of this character, which must otherwise have cost the Government many thousands of dollars, has been done by our older boys under the supervision of the farmer, assisted by officers in charge of the several families.

As to the present annual product of the farm, most of our early summer crops were below the average, both in quantity and quality. Of hay and grass there was a bountiful supply, and so also of the later field-corn.

Our standard fruits all gave early promise of an abundant yield, but the unusually wet season, with other local causes, almost entirely prevented their maturity. But for this there would have been a large surplus both of apples and peaches, as these orchards are each quite extensive and contain many choice varieties of fruits. The crop of Concord and white Niagara grapes—once a source of considerable annual revenue to the school—again proved a complete failure, as it has for several successive years, and from the same causes that have produced like results in other large vineyards in this locality.

Many important improvements have been made during the year, and much necessary repairing done in connection with the several departments of the school. To speak of each in detail would include the work of skilled artisans in many branches of mechanical industry, and include also the name and value of countless articles, from the smallest gas-jet to a steam-boiler of ample dimensions. Our principal buildings have been in use for many years, long enough, at least, to require frequent and often expensive repairs, the cost of which should not be included when rating expenditures for ordinary supplies. In this connection it may be fairly claimed that our standard is above the general average, as compared with others, in the kind and quality of the supplies you have always and uniformly provided for the healthful maintenance, including the care and personal comfort, of every boy under your control.

The new family building has been completed and occupied since January last, by our "B" family, which now includes only the larger white boys.

This necessitated the organization of another division, which is now located in either wing of the main building and known under the new arrangement as family "C." The addition of this building has made it possible to complete your well-matured plans, by which the smaller boys are now congregated in one family, separate and apart from all others.

Additional officers and teachers have been employed to meet this emergency, which explains the increase in amount required for salaries of this class, and this should be added to your estimates for the coming year.

The additional room provided by this new building has offered the first and only opportunity for safely increasing our population, and already the result is an average number of inmates larger than ever before. Another advantage gained was a timely reduction of population in buildings that had long been overcrowded; but the most important result secured by these changes has been the placing of boys

of about the same relative ages together and in buildings distinctively their own. The organization of our new family also necessitated changes in the former school grades, and we now have six daily sessions, holding about four hours each, in the several family school-rooms.

It has not been found necessary to make any marked changes in the character or conduct of our educational work. Special attention has always been given to this important department during the time the schools are in session. Every boy, when in health, is required to spend a portion of each school day in study, and none are excused from a regular attendance upon one daily session except by permission of the superintendent. Ordinary methods now employed by the more advanced instructors in our public schools are accepted as models and their routine of daily study adopted as far as practicable. Our books for instruction in reading, writing, arithmetic, and geography are much the same as those in present use in the District common schools. Recitations in these fundamental studies cover a large proportion of the time each boy is required to spend in school.

Several classes in the advanced grades recite in algebra, geometry, and history, but these studies are confined to boys in our "B" family, and their recitations are made to the senior teacher, and often after the regular session has closed. In addition to the stated lessons frequent repetitions, in concert, of the multiplication tables are required. Such exercises, however, are confined to the short evening sessions, conducted by the teacher in charge for the day, who usually arranges his own programme, without reference to fixed rules.

Under existing rules boys can only be discharged on their "Honor Badge" and after having acquired some knowledge of arithmetic in the four primary divisions, together with a fair ability to read and write and to recite readily the multiplication tables. The requirements under this wholesome rule have proved a wonderful incentive to increased application in study with most of our boys, and even the dullest intellect will sometimes gather sufficient courage from this one source of inspiration to gain such promotion in his class as will secure to him the proffered boon—his honorable discharge.

The hours for work and school remain unchanged from former years, still sharing about equally in the daily distribution during the eight continuous months in which the schools are in session.

This gives a long recess from study, but no corresponding relief is possible when applied to daily labor, as the demand for that is doubled during this busiest season of the year, and when our farm requires the help of every boy old and strong enough to assist in either field or garden work. But not, indeed, of every boy, for there is a large reserve that never can be spared for outside labor, however pressing its demands may be, and due exception must be made of these many trusted boys employed at indoor labor of various kinds in this most important branch of all our school industries. This small army of faithful helpers is permanently detailed, and kept on duty late and early, every day in seven, under the direction of competent instructors, male and female.

The demand for this large amount of domestic and other miscellaneous labor is both incessant and imperious, and, like "time and tide," waits for no one. Cleanliness with us may not always reach the Apostle's higher standard, but it is valued nevertheless to an extent that prompts us to keep not only the platter, but "every nook and corner clean."

And, again, we are ever and pointedly directed to the fact, and realize it more fully every day, that the mouths of hungry boys are ever clamorous for bread, and that empty stomachs of this particular kind and

gender are ever waiting to be filled, and that, too, with a triple daily allowance measured by the scriptural standard. And still further, that "through summer's heat and winter's cold," this same jubilant, rollicking boy, multiplied by hundreds, must have the body comfortably clothed as well as fed, and generously cared for in other innumerable ways.

And thus it goes through each succeeding day, from week to week and month by month, until the "rounded year" has passed.

This readily suggests the inevitable round of duties that depend directly on these youthful helpers, calling them to service under cooks and bakers, tailors, shoemakers, and others of not less importance in their several positions.

It includes, as well, also, matrons of families, housekeepers and others in charge of dining-rooms and laundry, each intrusted with a portion of this large array of help, and all thus adding their quota to the great aggregate of this domestic labor so necessary to the healthful life and daily comfort of themselves and others. And yet the product of this labor is in no sense a source of revenue, nor does this entire force of boys—all wage-earners, if so employed outside—bring any moneyed income or add directly to the financial resources of the school.

But with all this work of hand and brain there is never wanting to each and every boy his just proportion of play and recreation. This serves to shorten the duller hours assigned to labor and makes their seeming burdens tolerable to even the most indolent.

I venture the opinion that, whether here or elsewhere, no well spent working day should ever pass entirely where numbers are employed together, without some rays of sunshine reaching it from boyish hearts, made bright and glad by healthful exercise and friendly contact with their fellows on the play-ground. By right of birth and natural inheritance every fairminded boy is entitled to certain shares in fee simple in this kind of realty, and all power must be arbitrary in itself that would seek to wholly disinherit him.

Estimates have been submitted to the proper authorities for current expenses and for necessary improvements and repairs. The aggregate of these as named in your report to the honorables the Attorney-General and the Commissioners of the District of Columbia, does not exceed or overestimate the real wants of the institution for the coming fiscal year.

Your attention is respectfully directed to the condition of our school grounds, especially to the boys' play-grounds, adjacent to main and "A" family buildings. These grounds have never been properly graded, and will require a liberal expenditure to make them of any practical benefit to the school.

Owing to their unfavorable location, made originally from necessity rather than choice, they will require much additional grading and draining, together with a retaining-wall several feet in height. This wall is required also to protect the roadway adjoining, and keep it from washing out entirely. Our older boys, working in their own and the common interest of all, would gladly contribute a portion of the labor required to complete this much-needed improvement.

Next in importance in this connection is that portion of the grounds lying immediately in front and west of our main building. This entire frontage will require new fencing to protect it against intrusion from the public roadway, which also forms the boundary line on this side of the farm. A large portion of this ground is badly depressed, very uneven and broken in surface, and, in places, drops below the road level. Dur-

ing heavy rains, as in the present season, these low grounds are covered with water much of the time, and thus rendered entirely useless for farming purposes. Even in ordinary seasons the soil is damp and sour, and comparatively worthless.

Under a thorough system of drainage these conditions could readily be changed, and at reasonable cost. Our principal roadway enters and leads through these grounds directly to the main and other buildings, and hence they should be made both highly productive and attractive in appearance. Speaking from a purely sanitary standpoint, and as a means of promoting the general health, they should receive the prompt attention their condition so urgently demands.

The erection of our new family building necessitated changes in roadways, and permanent brick walks should now be laid between it and other buildings. The lawns immediately adjoining will also require further grading and drainage, while the building itself should be painted and made to conform in its outward appearance to others near by.

An additional boiler equal in size and capacity to the one in present use should certainly be provided, and with the least possible delay. This would complete our new steam-heating plant and furnish heat sufficient to warm all our buildings even in the coldest weather, including workshops and greenhouses. We should have this boiler to use as an alternative in case of accident or when repairs are required to the one now in use. It is neither safe nor prudent to be without expedients in a matter so important to the health and comfort of our large population. In our present condition we are beyond any possible relief from the results of a weather temperature at zero. The need for this improvement is self-apparent and should make its own most direct and convincing appeal.

A suitable building is also required of sufficient dimensions to shelter these boilers and provide quarters for the engineer in charge, as well as to provide against the possibility of frozen water-pipes and accidents from other and like causes. Our coal-vaults, partially provided for in a former appropriation, should be enlarged by necessary additions sufficient to hold the required amount of fuel to last throughout the longest winter, as we are far removed from ready sources of supply.

The "main" and "A" family buildings, together with the barn and other outbuildings, all need painting, to protect them from the weather. Ordinary repairs are provided for in the appropriations for current expenses, but this should receive a merited addition of not less than $1,000.

I trust you will be able to present all these reasonable claims with such force and earnestness to the Congress soon to assemble that every dollar asked in your estimates so carefully prepared will receive from them a full and prompt approval.

The general health of the school throughout the year has been quite equal to the average of its many predecessors. No epidemic or contagious diseases of any kind have been prevalent, and no deaths have occurred from any cause. The same favorable report was made for the year just preceding. The attending physician, Dr. Charles A. Wells, has paid us many visits, meeting promptly all demands the school has made upon his time and skill, and to the entire satisfaction of his patients, young and old. His annual report, already in your hands, covers all necessary details concerning this special department, in which, to us, his word is law.

In accordance with custom, our religious services have been statedly held throughout the year on Sabbath afternoons at 3 o'clock. These services are open and free to all, and are not held in the interest of any

one sect or denomination, and hence are not doctrinal in their teachings and tendencies. For the kind offices of ministers and others, who from time to time have favored us in the conduct of these always interesting Sabbath-day exercises, we here record our grateful acknowledgments, and bid them, each and all, a cordial welcome back as time and opportunity may jointly make occasion for their coming.

Our Sabbath-school sessions have also been held in each family school-room at 10.30 o'clock every Sabbath morning. As heretofore, the lesson-papers published by the American Sunday School Union have been used. Officers and teachers in care of the several families have special charge of these exercises, and the superintendent seldom fails to be present in each family during some portion of the time occupied in their sessions.

All of our boys in connection with the Catholic Church services assemble Sabbath afternoons for special instructions under teachers who come from the city for such purpose. Rev. E. A. McGurck, president of Gonzaga College, continued his monthly visits throughout the year on Sabbath mornings to conduct a special service and administer the sacraments of their church.

I have always favored the most liberal provision for a suitable observance of our annual holidays. They are few enough at best, and the intervals between them long indeed when measured by the average boy. "Thanksgiving day" is always welcomed at the school, and this one proved no exception to the rule, as it brought the usual rest from work and study. But more than this and better still it brought a rich supply of all that served to fill and satisfy the "inner boy"—of "roasts and pies and puddings rare." For blessings such as these, at least, there were many thankful hearts that bright November day.

But "Fourth of July" and "Merry Christmas" are our true red-letter holidays, and in their time and season both were fitly honored—the one appropriately garlanded with buntings striped and starred, the other crowned with pines and decked with hollies, green and red.

"The Fourth" was loud with shouts of boyish victors in the games and sports by day, while noise of bursting bombs and flying rockets filled the air by night.

Our Christmas, too, was joyous in its revelries, but of a milder type, and changed as well in all it brought of jingling bells and tooting horns, with good old Santa Claus to meet a host of merry boys, and well prepared to stuff, with nuts and sweets of varied kinds, their gaping pockets to the full. Thus came and passed these bright memorial days, with neither strife nor accident to mar their pleasure, "for all went merry as a marriage bell."

Our annual entertainment, as given by the boys selected and prepared for their several parts under competent instructors, was given at the school, as usual, in the month of January. The attendance was large, all that could be accommodated, including the president and several members of the board of trustees, with many other good friends, ladies and gentlemen, and all were happy judging from the rounds of applause at the close of each separate performance. Mr. W. K. Cohen, our teacher of vocal music, took charge of his special part of the programme, conducting it throughout with marked success. We were favored also with a number of fine cornet accompaniments by Professor Gibson.

Other pleasant literary and musical entertainments were given on different occasions by ladies and gentlemen, all good friends of the school, and should this paragraph ever meet their personal notice, each and all may safely accept it as a deserving tribute to their professional

worth, and as a token of gratitude from us for favors thus graciously extended.

I have to acknowledge, and do so very cordially, the receipt of many favors from friendly hearts and hands that have come so opportunely to our boys at stated times during the year.

From the general post-office there has been received monthly a sack containing printed matter, consisting of standard magazines, periodicals of various kinds, illustrated newspapers, and altogether much excellent reading especially suited to our older boys. Added to these were many beautiful cards, prints, and valentines, all carefully selected, as was also the reading matter, by the good ladies in charge of these official distributions made at the instance of the honorable the Postmaster-General.

From other sources we have received many similar favors, and, on several occasions, complete files of choice weekly papers such as the "Youth's Companion," "Harper's Young People," and "Golden Days," all pleasant and profitable reading for boys.

We have given hearty welcome also to regular copies of several school journals that have come to us from friends in distant States. Sometimes, like Zaccheus of old, "small of stature," but in this only, as all are creditable specimens of the printer's art. Among these we name "The Advance," from the State Reform School, New Jersey; "The School Enterprise," from the Lyman School for Boys, Massachusetts, and "The Howard Times," from the State Reform School of Rhode Island.

No changes have been made within the year in our official force other than were occasioned by the re-organization of the several families, and but few in our entire force of employés. As co-workers with me, each in a separate sphere, yet as I trust with the same common good in view, to one and all I am grateful for assistance timely rendered and for that efficient help which always comes from faithful service.

To you, gentlemen of the board of trustees, I submit this report, expressing also my grateful acknowledgments for your continued confidence, trusting that I have met your approval in all my efforts to do your will throughout another year of fairly prosperous work.

To the Infinite Giver, who governs all, belongs the expression of our deepest gratitude and highest praise.

Respectfully submitted.

G. A. SHALLENBERGER,
Superintendent.

THE BOARD OF TRUSTEES.

REPORT OF THE TREASURER.

REFORM SCHOOL OF THE DISTRICT OF COLUMBIA,
Washington, D. C., September 17, 1889.

GENTLEMEN: I have the honor to transmit herewith statements in detail of my receipts and disbursements as treasurer of the Reform School during the fiscal year ended June 30, 1889.

I have also received from the superintendent of the school during the fiscal year the sum of $3,143.40, being revenues derived from labor of inmates and other sources. In accordance with the act of Congress approved 25th of February, 1885, I have paid the same into the Treasury of the United States to the credit of the United States and the District of Columbia in equal parts.

Very respectfully and truly,

SAM'L W. CURRIDEN,
Treasurer.

THE BOARD OF TRUSTEES.

Receipts and disbursements of S. W. Curriden, treasurer of the Reform School of the District of Columbia, for the fiscal year ended June 30, 1889.

RECEIPTS.

Current expense accounts:	
Appropriation for salaries	$12,596.00
Appropriation for support of inmates	26,000.00
Total appropriation	38,596.00

DISBURSEMENTS.

Month.	Name.	For what expended.	Amount.
1888.			
July	Philip Nicholas	Pay-roll for month of July	$933.00
	George Gilbert	Compensation	25.00
	Henry Logan	do	19.00
	William McDevitt	do	18.00
	Louisa Johnson	do	12.00
	George A. Shallenberger, superintendent	do	7.50
August	William M. Galt & Co	Sundries	10.30
	B. R. Scannell	Flour	221.97
	George M. Oyster & Co	Meat	157.80
	Beall & Baker	Butter	102.70
	Hume, Cleary & Co	Groceries	71.89
	Browning & Middleton	do	79.99
	Lansburg & Bro	do	134.87
	Woodward & Lothrop	Dry goods	16.37
	Eiseman & Bros	do	32.26
	B. J. Behrend & Son	Clothing	11.00
	Tschiffely & Evans	Sundries	11.05
	Robert Cohen	Medicine	9.47
	W. L. King & Bro	Shoes	24.35
	H. A. Clarke & Son	Leather, etc	12.27
	Washington Gas-Light Company	Coal	13.05
	John A. Baker	Gas	14.13
	W. T. Walker's Son	Pump	32.15
	E. N. Gray & Co	Cement	19.00
	F. P. May & Co	Grates	6.76
	M. W. Beveridge	Hardware	20.93
	Andrew Barbour	Tableware	13.37
	J. E. Berry	Cementing walls	29.70
		Carriage hire	12.00
	Philip Nicholas	Pay-roll month of August	933.00
	H. Logan	Compensation	25.00
	William McDevitt	do	18.00
	Louisa Johnson	do	9.00
	G. A. Shallenberger, supt	do	7.50
September	Robert Cohen	Sundries	17.91
	C. A. Wells	Shoes	39.25
	Washington Gas-Light Company	Medical services	50.00
	Browning & Middleton	Gas	19.63
	Hume, Cleary & Co	Groceries	199.29
	Beall & Baker	do	232.70
	George M. Oyster & Co	do	6.55
	Independent Ice Company	Butter	81.06
	G. F. Swift & Co	Ice	15.96
	William M. Gault & Co	Meat	173.99
	Lansburg & Bro	Flour, etc	229.47
	Woodward & Lothrop	Dry goods	78.67
	Eiseman Bros	do	91.32
	Saks & Co	Clothing	23.50
	B. J. Behrend & Son	do	5.00
	W. L. King & Bro	Sundries	7.92
	J. M. Lauxman	Shoe findings	17.64
	O'Neill Bros	Blacksmithing	20.70
	George Ryneal, jr	do	8.25
	T. W. Smith	Paints, etc	7.85
	G. T. Blake	Lumber	8.44
	Craig Bros	Washers	4.00
	John A. Baker	Plants	38.70
	George Watts	Tools	24.00
	M. W. Beviridge	Houseware	8.52
	Evening Star Newspaper Company	do	8.37
	J. E. Berry	Advertising coal proposals	9.00
	Olcott & Cooper	Carriage hire	20.00
	Guy Curran & Co	do	8.00
	William H. Ernest	Dry goods	11.34
	William R. Riley	Flower pots	15.70
		Dry goods	13.35

Receipts and disbursements of S. W. Curriden, etc.—Continued.

DISBURSEMENTS—Continued.

Month.	Name.	For what expended.	Amount.
1888.			
September...	Tschiffely & Evans	Medicine	$26.55
	J. L. Parsons	Carpentry	20.00
		Pay-roll month of September	918.00
	W. K. Cohen	Compensation	25.00
	Philip Nicholas	do	25.00
	John H. Slack	do	15.00
	Louisa Johnson	do	7.50
	Browning & Middleton	Groceries	172.28
	Hume, Cleary & Co	do	139.27
	Beall & Baker	do	15.13
	Wm. M. Galt & Co	Flour, etc	200.22
	Thomas T. Keane	Meat	178.51
	James F. Oyster	Butter	57.32
	N. White & Co	Oysters	8.60
	Tschiffely & Evans	Medicine	20.40
	Lansburg & Bro	Dry goods	32.28
	Woodward & Lothrop	do	187.98
	Guy, Curran & Co	do	12.36
	Eiseman Bros	Clothing	8.00
	Robert Cohen	Shoes	58.90
	W. L. King & Bro	Shoe findings	15.39
	William Ballantyne & Son	Stationery	5.65
	D. W. Beveridge & Co	Wire screens	9.00
	F. P. May & Co	Hardware	13.29
	M. W. Beveridge	Table ware, etc	24.72
	Columbia Railroad Company	Manure	109.20
	Washington Brick Machine Company	do	99.60
	Smith, Powell & Lamb	Farm stock	566.00
	J. E. Berry	Conveyance	12.00
	Andrew Barbour	Mason work	18.00
	G. A. Shallenberger, superintendent	Sundries	19.70
	Independent Ice Company	Ice	30.40
	John A. Baker	Farm tools	11.50
	E. N. Gray & Co	Grate bars	46.27
	C. Giebel	New cart, etc	36.93
	do	Repairs to carts	32.50
	J. T. Walker's Son	Cement	5.65
	L. H. Schneider's Son	Hardware	7.15
	Chesapeake and Potomac Telephone Company	Service to Sept. 30	37.50
	S. W. Curriden	do	150.00
October.....	Washington Gas-Light Company	Gas	55.50
	W. L. Holtman	Cattle powders	5.01
	Allan R. Adams	Copying	23.50
		Pay-roll month of October	933.00
	Philip Nicholas	Compensation	25.00
	W. K. Cohen	do	25.00
	Henry Logan	do	16.00
	Louisa Johnson	do	7.50
	J. P. Agnew & Co	Coal	1,503.00
	G. A. Shallenberger, superintendent	Sundries	13.55
November...	William M. Galt & Co	Flour	211.35
	Hume, Cleary & Co	Groceries	51.71
	Browning & Middleton	do	182.08
	Beall & Baker	do	85.98
	W. L. Anderson	Kraut	8.50
	Thomas T. Keane	Meat	170.28
	J. J. Hogan	Oysters	11.70
	James F. Oyster	Butter	89.96
	Independent Ice Company	Ice	74.55
	Woodward & Lothrop	Dry goods	104.60
	Lansburg & Bro	do	226.09
	B. J. Behrend & Son	do	15.00
	Eiseman Bros	Clothing	24.00
	C. H. Garden & Co	Caps	61.75
	W. L. King & Bro	Leather	25.29
	Robert Cohen	Shoes	30.35
	William Ballantyne & Son	Books, etc	44.21
	E. L. Kellogg & Co	School books	3.03
	Harold Roarback	do	3.10
	C. A. Wells	Medical services	62.00
	Tschiffely & Evans	Medicine	8.80
	Washington Gas-Light Company	Gas	76.25
	M. W. Beveridge	Table ware	9.22
	George Watts	do	6.23
	George Ryneal, jr	Paint, etc	21.50
	James L. Parsons	Repairs	38.50
	John McDermott & Bro	Repairs to vehicles	65.00
	L. H. Schneider's Son	Hardware	5.95

Receipts and disbursements of S. W. Curriden, etc.—Continued.

DISBURSEMENTS—Continued.

Month.	Name.	For what expended.	Amount.
1888.			
November...	G. N. Holland	Lime and cement	$9.85
	William Lochte	Blacksmithing	3.75
	O'Neill Bros	do	9.00
	Thomas Somerville & Son	Pipe	23.46
	T. C. Bassbor & Co	Pump	20.00
	John A. Baker	Seed	17.40
		Pay-roll month of November	933.00
	William K. Cohen	Compensation	25.00
	Philip Nicholas	do	25.00
	Louisa Johnson	do	7.50
	George A. Green	Plumbing	644.00
	George Gilbert	Paving	18.00
	Henry Logan	do	18.00
December...	Andrew Barbour	Mason work	18.00
	William M. Galt & Co	Flour	239.20
	Thomas T. Keane	Meat	171.56
	J. J. Hogan	Oysters	13.13
	Browning & Middleton	Groceries	247.31
	Hume & Co	do	214.50
	James F. Oyster	Butter	71.31
	Independent Ice Company	Ice	71.75
	Tschiffely & Evans	Medicine	15.60
	Woodward & Lothrop	Dry goods	49.90
	Lansburg Bros	do	11.76
	Pitkin & Thomas	do	55.20
	Guy, Curran & Co	do	21.60
	B. J. Behrend & Son	do	9.87
	R. Cohen	Shoes	27.55
	J. P. Agnew & Co	Coal	590.00
	Washington Gas-Light Company	Gas, November	75.75
	J. M. Lauxman	Blacksmithing	18.80
	C. Giebel	do	11.95
	William Lochte	do	9.79
	J. D. Milans	Printing	18.50
	F. P. May & Co	Hardware	14.98
	M. W. Beyeridge	Tableware	10 45
	Thomas Somerville & Sons	Pipe, etc	9.63
	William H. Harrover	Tinning	27.57
	do	do	6.20
	Daniel Hannan	Spigots	7.75
	George Ryneal, jr	Paint, etc	14.75
	T. W. Smith	Lumber	18.52
	C. Strauss & Co	Plants	11.50
	J. E. Berry	Conveyance	8.00
	do	do	16.00
	G. A. Shallenberger, superintendent	Sundries	10.70
		Pay-roll, December	918.00
	J. W. Slack	Compensation	18.00
	Philip Nicholas	do	25.00
	William K. Cohen	do	25.00
	L. Johnson	do	7.50
	A. O. Brummel	Repairs to roof	49.00
	George A. Shallenberger	Sundries	22.39
	William M. Galt & Co	Flour and feed	268.85
	G. F. Swift & Co	Meat	120.81
	Browning & Middleton	Groceries	138.19
	Hume & Co	do	129.98
	Beall & Baker	do	76.31
	C. A. Denekas	Yeast	20.75
	James F. Oyster	Butter	107.93
	J. J. Hogan	Oysters	10.50
	C. A. Wells	Medical services	66.00
	Tschiffely & Evans	Medicine	15.20
	John P. Agnew & Co	Coal	129.80
	Lansburg & Bro	Dry goods	83.41
	Guy, Curran & Co	do	28.64
	B. J. Behrend & Son	do	10.42
	Eiseman Bros	Clothing	29.00
	William Hahn & Co	Shoes	25.55
	W. L. King & Bro	Leather, etc	21.68
	M. W. Beveridge	House ware	8.85
	Washington Brick Machine Company	Manure	101.20
	Columbia Railroad Company	do	109.20
	K. Kneesi & Son	Repairs to harness	14.25
	O'Neill Bros	Blacksmithing	7.00
	John A. Baker	Wheelbarrow	8.50
	J. D. Free & Co	Stationery, etc	28.51
	William Lochte	Blacksmithing	16.01

Receipts and disbursements of S. W. Curriden, etc.—Continued.

DISBURSEMENTS—Continued.

Month.	Name.	For what expended.	Amount.
1888.			
December	F. P. May & Co	Hardware	$11.94
	George Ryneal, jr	Paint, etc	12.20
	Daniel Hannan	Plumbing	5.00
	J. E. Berry	Conveyance	12.00
	Chesapeake and Potomac Telephone Company	Telephone	37.50
	do	do	15.00
	S. W. Curriden	Services to December 31	150.00
	Rider & Addison	Stationery	5.66
1889.			
January	G. P. Muller	Sundries	22.78
	Woodward & Lothrop	Dry goods	46.87
	William Ballantyne & Son	Stationery	12.55
	B. P. Murray	Entertainment	10.00
	James L. Parsons	Repairs to laundry	51.50
	do	Towel-racks	9.00
	Washington Gas-Light Company	Gas, December	92.95
	D. W. Beveridge & Co	Wire work	24.60
		Pay-roll month of January	943.00
	W. K. Cohen	Compensation	25.00
	Louisa Johnson	do	7.50
	Philip Nicholas	do	25.00
	G. W. Nichols	Pay-roll	40.00
	G. A. Shallenberger, superintendent	Sundries	19.83
February	Hume & Co	Groceries	117.09
	Browning & Middleton	do	113.31
	Beall & Baker	do	136.72
	W. S. Anderson & Co	Provisions	8.00
	J. F. Oyster	Butter	94.57
	William M. Galt & Co	Flour, etc	244.95
	Nelson, Morris & Co	Meat	142.16
	J. J. Hogan	Oysters	5.25
	R. Cohen	Shoes	44.60
	W. L. King & Bro	Shoe findings	16.56
	Pitkin & Thomas	Dry goods	76.70
	Woodward & Lothrop	do	63.87
	Lansburg & Bro	do	13.54
	Guy, Curran & Co	do	13.77
	Washington Gas-Light Company	Gas, two months	99.70
	Tschiffely & Evans	Medicine	14.80
	William Ballantyne & Son	Stationery	23.96
	J. T. Walker's Sons	Cement	2.45
	George Ryneal, jr	Paint	9.70
	William Lochte	Blacksmithing	11.63
	M. W. Beveridge	House ware	22.05
	F. P. May & Co	Hardware	6.79
	L. H. Schneider's Son	do	10.12
	George F. Blake	Valves	3.80
	S. S. Shedd & Bro	Gas fixtures	35.95
	R. Leitch & Sons	Pipe and fittings	6.88
	Thomas Somerville & Sons	do	49.22
	T. C. Basshor & Co	do	7.80
	J. E. Berry	Conveyance	22.00
		Pay-roll month of February	934.67
	Louisa Johnson	Compensation	7.50
	Philip Nicholas	do	25.00
	W. K. Cohen	do	25.00
	G. W. Nichols	Salary, teacher, pay-roll	40.00
March	John Dixon	Painting	10.00
	Eugene White	Salary as watchman	8.33
	Browning & Middleton	Groceries	150.09
	Hume & Co	do	115.89
	Beall & Baker	do	76.53
	William M. Galt & Co	Flour	238.53
	Nelson Morris & Co	Meat	160.60
	J. J. Hogan	Oysters	9.75
	James F. Oyster	Butter	87.65
	Tschiffely & Evans	Medicine	22.24
	Woodward & Lothrop	Dry goods	96.32
	Lansburg & Bro	do	51.44
	Guy Curran & Co	do	20.41
	Elseman Bros	Clothing	35.50
	Robert Cohen	Shoes	17.80
	W. L. King & Bro	Leather	8.76
	John P. Agnew & Co	Coal	430.50
	Washington Gas-Light Company	Gas	46.00
	Charles H. Dickson, agent	Rental gas governor	10.00
	William Ballantyne & Son	Stationery	9.05
	J. D. Milans	do	9.70

Receipts and disbursements of S. W. Curriden, etc.—Continued.

DISBURSEMENTS—Continued.

Month.	Name.	For what expended.	Amount.
1889.			
March	William H. Ernest	Flower-pots	$17.00
	M. W. Beveridge	House ware	16.80
	F. P. May & Co	Hardware	4.24
	George N. Holland	Lime	6.05
	S. S. Shedd & Bro	Gas fixtures	5.50
	George Ryneal, jr	Paint, etc	16.05
	Ward & Cunningham	Repairs	69.03
	Thomas Somerville & Sons	Pipe	6.36
	D. W. Beveridge	Wire work	14.80
	William Lochte	Blacksmithing	13.50
	W. T. Walker's Sons	Cement	4.13
	Hutchinson Bros	Range lining	7.50
	G. A. Shallenberger, superintendent	Sundries	19.90
	C. A. Wells	Medical services	54.00
	M. Silverberg	Sundries	6.72
		Pay-roll, March	1,030.00
	W. K. Cohen	Compensation	25.00
	Philip Nicholas	do	25.00
	Louisa Johnson	do	7.50
	George P. Zurhorst	Conveyance	8.00
	J. E. Berry	do	12.00
	Allan R. Adams	Services	5.00
	William M. Galt & Co	Flour, etc	253.15
	B. R. Scannell	Meat	148.86
	R. A. Golden	Fish	14.60
	J. J. Hogan	Oysters	10.20
	Browning & Middleton	Groceries	135.80
	Beall & Baker	do	65.00
	James F. Oyster	Butter	69.42
	Tschiffely & Evans	Medicine	21.04
	Washington Gas-Light Company	Gas	59.00
	J. P. Agnew & Co	Coal	266.50
	Lansburg & Bro	Dry goods	71.44
	Guy Curran & Co	do	12.76
	Lewis Baer	do	1.63
	Woodward & Lothrop	do	10.00
	Augustus Thomas & Co	do	27.00
	B. J. Behrend & Son	do	9.28
	Eisenman Bros	Clothing	10.40
	Saks & Co	do	20.02
	William Ballantyne & Son	Stationery	44.70
	E. Morrison	do	4.55
	J. D. Milans	Printing	18.00
	Brown & McElfresh	do	9.00
	Johnson & Stokes	Seeds	52.72
	John A. Baker	do	11.73
	William H. Ernest	Flower-pots	19.50
	O'Neill Brothers	Blacksmithing	8.50
	Offie Anderson	do	10.60
	Columbia Railroad Company	Manure	120.12
	Washington Brick Machine Company	do	106.80
	W. B. Moses & Son	Furniture	127.35
	W. B. Williams	Carpets	145.03
	M. W. Beveridge	House ware	10.64
	F. P. May & Co	Hardware	10.70
	Thomas W. Smith	Lumber	50.50
	James L. Parsons	Repairs to bakery	39.50
	E. N. Gray & Co	Grate-bars	9.87
	George Ryneal, jr	Glass, oil, etc	18.50
	C. & P. Telephone	Rental, A. J. F. to Mch. 31, '89	15.00
	do	Rental, school, Mch. 31, '89	37.50
	J. E. Berry	Conveyance	12.00
	G. A. Shallenberger, superintendent	Sundries	20.50
	S. W. Curriden	Services three months	150.00
April	J. L. Mott	Fire-brick	3.70
		Pay-roll, month of April	1,028.00
	J. H. Slack	Compensation	25.00
	W. K. Cohen	do	25.00
	John Stevens	do	15.00
	L. Johnson	do	7.50
May	Hume & Co	Groceries	100.82
	Schlegel & Quigley	Horses	400.00
	G. A. Shallenberger, superintendent	Sundries	17.74
	William M. Galt & Co	Flour	261.79
	Browning & Middleton	Groceries	173.27
	Hume & Co	do	41.04
	Beall & Baker	do	108.94
	J. F. Oyster	Butter	84.28

Receipts and disbursements of S. W. Curriden, etc.—Continued.

DISBURSEMENTS—Continued.

Month.	Name.	For what expended.	Amount.
1889.			
May	G. F. Swift & Co	Meat	$151.58
	R. A. Golden	Fish	13.50
	Washington Gas-Light Company	Gas	40.50
	J. P. Agnew & Co	Coal	102.50
	Woodward & Lothrop	Dry goods	75.18
	Lansburg & Bro	do	85.38
	Saks & Co	Clothing	7.95
	Eiseman Brothers	do	13.50
	B. J. Behrend & Son	Dry goods	6.90
	Guy Curran & Co	do	10.04
	B. Solomon	Hats	5.92
	Robert Cohen	Shoes	49.15
	W. L. King & Bro	Leather, etc	20.69
	F. P. May & Co	Hardware	20.78
	L. H. Schneider's Son	do	18.05
	M. W. Beveridge	Table ware	5.20
	William Ballantyne & Son	Books, etc	11.00
	J. D. Fres, jr	Stationery, etc	12.86
	George Ryneal, jr	Paint, etc	6.25
	G. Y. Hansell	Papering	30.00
	W. B. Williams	Carpet, etc	245.50
	John A. Baker	Seed, etc	24.04
	Samuel Wilson	Plants	13.00
	William H. Ernest	Flower-pots	32.25
	Offie Anderson	Blacksmithing	14.75
	J. W. Langdale	Rose-plants	105.00
	J. E. Berry	Conveyance	23.00
	Charles A. Wells	Medical services	78.00
		Pay-roll, month of June	1,008.00
	W. T. Hollis	Watch	11.25
	R. H. Stevens	Compensation	16.00
	John Stevens	do	20.00
	J. H. Slack	do	25.00
	W. K. Cohen	do	25.00
	Louisa Johnson	do	7.50
June	William M. Galt & Co	Flour	264.07
	J. T. Varnell & Son	Meat	214.55
	R. A. Golden	Fish	13.60
	Beall & Baker	Groceries	42.35
	Browning & Middleton	do	160.96
	Hume & Co	do	173.11
	James F. Oyster	Butter	67.08
	Washington Gas-Light Company	Gas	31.50
	Tschiffely & Evans	Medicine	16.60
	Woodward & Lothrop	Dry goods	79.53
	Lansburg & Bro	do	28.90
	Guy Curran & Co	do	18.81
	B. J. Behrend & Son	do	8.40
	Eiseman Bros	Clothing	20.00
	C. H. Garden & Co	Hats	23.04
	Robert Cohen	Shoes	57.75
	W. L. King & Bro	Leather	30.23
	William Ballantyne & Son	Books, etc	17.83
	George Ryneal, jr	Paint	12.35
	E. N. Gray & Co	Repairing laundry boiler	74.76
	George White & Sons	Repairing steps	25.00
	S. S. Shedd & Bro	Gas-fixtures	4.80
	M. W. Beveridge	House ware	29.33
	W. H. Harrover	Stove, etc	25.15
	John A. Baker	Seeds	9.13
	C. Strauss & Co	Plants	19.18
	G. A. Shallenberger, superintendent	Sundries	22.89
	J. E. Berry	Conveyance	16.00
	D. Van Horn	Carpentering	12.50
		Pay-roll month of June	1,037.16
	Charles White	Compensation	10.00
	J. H. Slack	do	25.00
	R. H. Stevens	do	15.00
	Henry Logan	do	7.50
	W. K. Cohen	do	25.00
	John Stevens	do	20.00
	Emanuel Simms	Repairs	23.06
	Charles Chase	do	18.00
	G. A. Shallenberger	Sundries	25.24
	Thomas A. Smith	Lumber	44.86
	E. M. Willis	Ice	179.97
	William M. Galt & Co	Flour	253.53
	J. T. Varnell & Son	Meat	181.67

Receipts and disbursements of S. W. Curriden, etc.—Continued.

DISBURSEMENTS—Continued.

Month.	Name.	For what expended.	Amount.
1889.			
June	Browning & Middleton	Groceries	$67.80
	Beall & Baker	do	78.95
	Independent Ice Company	Ice	6.00
	C. C. Bryan	Groceries	27.55
	Tschiffely & Evan	Medicine	8.90
	Lansburg & Bro	Dry-goods	42.20
	Woodward & Lothrop	do	44.24
	B. J. Behrend & Son	do	10.55
	Eiseman Bros	Clothing	14.50
	Guy Curran & Co	do	17.09
	Anerbach & Bro	Hats	10.35
	Robert Cohen	Shoes	21.00
	Washington Gas-Light Company	Gas	22.00
	Columbia Railroad Company	Manure	80.08
	O'Neill Bros	Blacksmithing	17.50
	Offie Anderson	do	13.25
	K. Kneessi & Son	Harness	57.40
	James K. Probey	Repairs to wagon	85.00
	J. McDermott & Bro	do	20.00
	Rider & Addison	Stationery	3.27
	J. D. Milans	Printing	10.50
	William Ballantyne & Son	Stationery	3.53
	George Watts & Son	Table ware	12.79
	M. W. Beveridge	do	13.64
	F. P. May & Co	Hardware	15.75
	L. H. Schneider's Son	do	17.55
	Ward & Cunningham	Plumbing	63.90
	Melville Lindsay	Fire-hose	21.10
	W. H. Harrover	Stove, etc	20.70
	C. H. Dickson, agent	Gas governor rental	30.00
	J. T. Walker's Son	Lime	5.36
	George N. Holland	Lime, etc	12.65
	James Anderson	Conveyance	4.00
	J. E. Berry	do	24.00
	Guy Curran & Co	Sundries	28.45
	C. Denekas	Yeast	20.20
	Washington Brick Machine Company	Manure	115.20
	Charles A. Wells	Medical services	68.00
	S. W. Curriden	Treasurer	150.00
	Louisa Johnson	Compensation	7.50
	James F. Oyster	Butter	75.65
	W. J. Holtman	Lard	8.21
	William Donnelly	Dental services	25.50
	Augustus Thomas	Dry goods	69.90
	W. L. King & Bro	Shoe-findings	2.04
	John A. Baker	Seed, etc	19.20
	George Ryneal, jr	Paint	13.90
	F. H. Young	Cleaning carpets	9.04
	George A. Green	Plumbing	17.00
	C. and P. Telephone Company	Rent to June 30	52.50
	William R. Riley	Dry goods	1.83
	Hume & Co	Groceries	132.27
	Thomas Somerville & Sons	Hardware	3.05
	A. O. Brumnell	Repairing roofs	165.00
	M. Anderson	Rebuilding porch	64.00
	J. D. Free, jr	Stationery	8.91
	G. A. Shallenberger, superintendent	Sundries	3.55
	Andrew Barbour	Repairs	52.00
	T. C. Basshor & Co	Laundry boiler, etc	415.00
	Total disbursements		38,496.85

RECAPITULATION.

Total receipts	$38,596.00
Total disbursements	38,496.85
Leaving an unexpended balance of	99.15

BUILDINGS AND GROUNDS ACCOUNT.

For two brick water-closets:			
Appropriated			$1,200.00
Disbursed:			
Notley Anderson, contract for buildings			998.00
Leaving unexpended			202.00
For addition to hog-pen:			
Appropriated			150.00
Disbursed:			
Thomas W. Smith, lumber		$53.48	
James L. Parsons, labor, carpentering		72.00	
T. W. Smith, lumber		11.76	
			137.24
Leaving unexpended			12.76
For grading, draining, and improving grounds:			
Appropriated			300.00
1888. Disbursed:			
August	George Gilbert, labor, paving	$18.00	
	Isaiah Dean, labor, paving	29.25	
	Charles Stewart, labor, paving	29.25	
	Andrew Barbour, mason-work	24.75	
September	Henry Logan, labor	18.00	
	George Gilbert, labor	18.00	
	Andrew Barbour, mason-work	29.25	
October	George Gilbert, labor	18.00	
	H. Burkhardt, paving-stone	11.50	
	Isaiah Dean, paving	33.00	
	Charles Stewart, paving	36.00	
	Thomas Somerville & Son, pipe	20.40	
			285.40
Leaving unexpended			14.60
For boiler-house, boilers, piping, and connections:			
Appropriated			4,000.00
Disbursed:			
James Hughes, raising smokestack		$170.00	
Evening Star Newspaper Co., advertising for proposals		5.63	
The Washington Post, advertising for proposals		6.38	
J. L. Parsons, frame boiler-house		200.00	
T. C. Bassher & Co, water-service pipes		154.00	
T. C. Bassher & Co., boilers, piping, and connections		2,996.00	
J. H. McGill, fire-brick		14.69	
Andrew Barbour, mason-work		18.00	
T. W. Smith, lumber		11.76	
			3,576.46
Leaving unexpended			423.54

REPORT OF THE ATTENDING PHYSICIAN.

REFORM SCHOOL OF THE DISTRICT OF COLUMBIA,
Washington, D. C., July 1, 1889.

GENTLEMEN: I am glad to report (for the second consecutive year) that there has been no death at the institution. We had eight cases of typhoid fever, commencing August 20. The last fever patient was not discharged from the hospital until the 31st of October. There must necessarily be many cases of illness from various causes among so many inmates. A very large percentage of the boys admitted come with inherited diseases or with systems impaired by vicious habits or irregular mode of living. To such our comfortable dormitories, generous food, and regular habits are of inestimable value. Strict watch has been kept over dormitories, bathing pools, and closets, disinfectants have been systematically and liberally used, while scrupulous cleanliness and thorough ventilation contribute to maintain the healthful condition of the inmates.

Among those matters important for the comfort and health of the boys is the present arrangement of our "outside closets." Waiting in

line there in all conditions of the weather brings many cases to the dispensary. I would respectfully suggest that "outside closets" similar to those in use at the new building be built for the other families.

I regard it as important that the heating apparatus for Family "A" building be improved at once. I am in the habit of leaving boys who are likely to be detained in bed only a few hours in the dormitory, and I know that great discomfort is often felt because of the unreliable method of heating the building. A still further recommendation is that some system of drainage (to include all the buildings and the grounds) be devised and executed in such manner that there would be no probable interruption in the near future. The play-ground should be so drained and arranged that the boys could use it except in the most inclement and boisterous weather.

I have learned with pleasure that your Board contemplates being represented at the International Prison Congress to be held at St. Petersburg the coming June, where the subject of reformatories will likely occupy an important place in the deliberations. I would be glad to have my department receive some attention in this case, and will be pleased to render such personal and professional assistance as will contribute to this end.

Very truly, yours,

CHAS. A. WELLS, M. D.,
Attending Physician.

The BOARD OF TRUSTEES.

REPORT OF COMMITTEE TO VISIT HOUSE OF REFUGE AT PHILADELPHIA AND NEW YORK.

REFORM SCHOOL OF THE DISTRICT OF COLUMBIA,
Washington, D. C., September 16, 1889.

GENTLEMEN: Pursuant to the resolution adopted the 29th day of August, the undersigned committe, appointed to visit the House of Refuge at Philadelphia, Pa., and at Randall's Island, New York, have the honor to submit the following report, after having thoroughly examined into the workings of those institutions.

At the House of Refuge, Philadelphia, the principal industries are brush-making, tailoring, shoe-making, and caning chairs.

The population of this institution on the day we were there was 650 boys and 170 girls.

The salaries paid amount to $32,000 per annum.

The salary of the superintendent is $3,000 per annum, and the superintendents of the shops from $1,000 to $1,200 per annum.

The teachers receive on an average $30 per month, but are not employed in any other capacity and teach three hours per day five days during the week.

An officer is employed in this institution, designated as an agent, who receives a salary of $1,500 per annum, whose duty it is to find homes for discharged boys and to visit them at their homes at least once a month.

Under the laws of the State of Pennsylvania, the institution has control over its inmates until they are twenty-one years of age, and if their homes are found at any time to be improper or if they are liable to be led astray or are not doing well, they can at any time be recalled to the institution.

A similar law, we are informed, applies to nearly every institution of a like character throughout the United States, with the exception of the Reform School of the District of Columbia, and although the attention of Congress was called to this matter and a bill introduced at its last session giving our school this authority, it failed to become a law.

After leaving Philadelphia, your committee proceeded to the House of Refuge at Randall's Island, New York.

The population of this institution on the day your committee arrived there was 579 boys and 85 girls.

This institution employs 72 officers and employés, including 20 teachers.

The salary of the superintendent is $3,500 and the salary of the principal teacher is $2,000 per annum, and the salaries of the assistant teachers average from $600 to $800 per annum. They are employed, in teaching and other occupations, from seven to eight hours per day.

The State appropriates about $120,000 per annum, and the proceeds from the work of the inmates average $20,000 per annum; making a total of about $140,000 per annum, to be expended for the current expenses of the institution.

Each of the institutions that we visited had a fine band, made up from the inmates, which was not only a great addition to the institution, but a great advantage to the boys composing the band, as the committee was informed that these boys had no difficulty in obtaining lucrative employment in the line of their calling after leaving the institution. We respectfully recommend that a band be attached to our school—the instruments can be purchased at an expense not to exceed $400, and an instructor can be obtained at a compensation of $600 per annum.

The House of Refuge at Philadelphia, after an experience of many years, has finally come to the conclusion that bars and bolts, high fences, stone walls, and cells are things that belong to the past and have no part in the reformation of juveniles.

They are about to abandon their present location, and they have purchased a farm of 400 acres, about 20 miles from the city of Philadelphia, paying therefor $52,000, and there has been appropriated for the erection of the necessary buildings the sum of $750,000, making a total of over $800,000 expended or to be expended by the State of Pennsylvania upon this one institution for the reformation of boys and girls.

After careful examination we find the industries of these schools to be similar to those of our own.

In conferring with the superintendents of these institutions, they strongly advised that as little machinery as possible be used and that no trades be taught which will require the use of much machinery, for the reason that when the inmates leave the institution they have no machinery of their own and must depend upon their own hands. Therefore they should be taught to work with their hands, without the aid of machinery. Of course *some* machinery is necessary.

In some institutions bricklaying, plastering, and carpentering is taught to a large extent. Practical mechanics are employed in daily teaching boys by building temporary houses and structures, and then tearing them down and rebuilding others of a different character, using the same material over and over.

It is true that in this work there is no pecuniary profit, but reform schools are not established for the purpose of making money, but for

the education and benefit of the inmates, to enable them to be self-supporting when they go out into the world.

After giving the matter careful consideration, your committee respectfully recommends that as large a class of boys as possible be employed in making shoes and clothing for the school. It is thought possible that the school can obtain work from large clothing establishments in this city and in Baltimore, and it might be worth trying.

All the shoes needed at the school can be and should be made upon the premises.

Caning chairs is an occupation only, and not a trade. The boys can be employed at it, and a small revenue derived from it, but it is of little use to the boys when they leave the school.

In addition to these, the most inexpensive industries that can be established would be bricklaying, plastering, and carpentering. These trades could be readily taught in the manner above suggested, and would be most useful callings for the boys.

The carpentering would also be of great advantage to the school, as the boys engaged in this work, being proficient in it, could do all the carpentering which will be required at the school, which would in the end amount to a great deal and save a large sum of money which is now expended.

The boys engaged in bricklaying could also be of use in making culverts, drains, and other work upon the premises, and the boys learning the trade of plastering could also be made useful.

It was the wish of your committee to have made some further inquiries at some other points, but their time was limited and the weather bad and disagreeable.

Very respectfully,

CECIL CLAY.
A. J. FALLS.

The BOARD OF TRUSTEES.

F 3.

INDUSTRIAL HOME SCHOOL.

GENTLEMEN: Herewith please find the report of the Industrial Home School as adopted at the meeting of October 1.

Respectfully,

WM. B. GURLEY,
President.

HULDAH W. BLACKFORD,
Secretary.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

ANNUAL REPORT OF THE BOARD OF MANAGERS OF THE INDUSTRIAL HOME SCHOOL OF THE DISTRICT OF COLUMBIA FOR THE YEAR ENDING JUNE 30, 1889.

HISTORICAL.

This institution owes its origin to an association started in 1864. It was first organized by some benevolent ladies of the District, who established a school where needy children were instructed in industries and were provided with food and clothing. Afterwards it was incor-

porated. About fifteen years ago it was removed to its present location. Since the act of Congress establishing the present form of government for the District of Columbia the institution, although working in its corporate character, is recognized as one of the charity organizations, under the control and patronage of the General Government.

PROPERTY.

The title to the property is vested in the District.

It consists of about 17 acres of ground, situated on the Tenallytown road, adjoining the new Observatory. The location is in every respect desirable; the site is elevated, and provides a suitable resort for the inmates, who are generally brought into the Home from unhealthy and improper habitations, unfit, for sanitary and other reasons, for human dwelling, and where sound physical development of youth or moral culture is impossible. The premises in part now occupied were built about seventy years ago for an almshouse.

It is manifest that to properly train children they should be domiciled in suitable habitations, and that those portions of the decaying buildings which were for many years occupied by paupers and the delinquent classes of people should no longer be used, either for shelter or school purposes, for the tender wards under our care. A new wing, similar to the old one built a few years since, with well-ventilated dormitories, school, class, and lecture rooms, should be erected.

This was the original intention when the present single wing was built. A plan has been prepared by the building inspector and architect of the District, and it is submitted with this report.

There should be provided the same accommodations for the pupils attending the public school on the premises as are afforded other children of the District.

Besides the unsuitableness of portions of the present premises want of room renders it impossible to comply with the constantly-increasing demands for admission to the Home.

When the additional wing is erected the abandoned portion of the present buildings can be set apart for industrial, hospital, and other purposes, and then there would be ample space for accommodating more children. By increasing the capacity of the dwelling and school the per capita cost of maintenance will be materially reduced.

The appropriation made by the act of Congress March 2, 1889, for heating and lighting improvements has been applied by the Commissioners of the District, as directed. The work has been entirely under the charge of the District authorities, who have disbursed the money. These improvements will be completed by November 1.

The severe storms of last winter did serious injury to the grounds, washing away the dam which had been built to make a reservoir of water in case of fire. Other damage was done, especially to the glazing of the greenhouse. Necessary repairs have been made, involving expenses not anticipated.

OBJECTS OF THE INSTITUTION.

The Industrial Home School is a home for the dependent, not the delinquent, class of children, where they receive not only scholastic education, such as is imparted in the regular schools of the District, but also a practical industrial training, being at the same time fed, clothed, and sheltered. The minimum age of admission is five years; the maximum is twelve years. A review of the work of the past year confirms former experience, that the Home has been the means of rescuing many

dependent children from avenues of disease, idleness, and crime, and directing them into paths of rectitude.

Numbers of our wards, after suitable instruction and manual training, have been found situations, where they are now earning a livelihood in honorable vocations.

GOVERNMENT.

The institution is directly controlled by a board of managers, the officers and committees of which are as follows:

OFFICERS.

William B. Gurley, president.
Hon. O. D. Conger, first vice-president.
Hon. William B. Snell, second vice-president.
Mrs. H. W. Blackford, secretary.
B. T. Janney, treasurer.

COMMITTEES.

Admission and placement:
Lewis Abraham.
Mrs. J. M. Flint.
Hon. William B. Snell.

Buildings, grounds, and employés:
Hon. J. B. Edmonds.
Hon. O. D. Conger.
Dr. M. D. Peck.

Finance:
W. Nordlinger.
M. H. Doolittle.
Mayhew Plater.

Greenhouse and garden:
Charles E. Foster.
Mrs. Charles E. Foster.
Mrs. J. B. T. Tupper.

Housekeeping:
Mrs. O. D. Conger.
Mrs. H. W. Blackford.
Mrs. Charles E. Foster.

Housekeeping—Continued:
Mrs. Emily Nourse.
Mrs. M. H. Doolittle.
Mrs. J. B. Edmonds.
Miss Alison Wilson.

Industries and education:
J. B. T. Tupper.
B. T. Janney.
Carlton Hughes.
J. B. Nourse.

Subcommittee on girls' industrial department:
Mrs Charles E. Foster.
Mrs. M. H. Doolittle.
Miss Alison Wilson.

On legislation:
Hon. William B. Webb.
Hon. O. D. Conger.
Hon. William B. Snell.

ADMISSION AND PLACEMENT.

Children are admitted by the committee, which meets at the rooms of the Humane Society, 910 F street, northwest, on the second and fourth Thursdays of each month.

It is required that the circumstances of the parents or guardians of wards shall be such that they are not able to take care of the children for whom admission is sought.

Visitation to the home of the applicant is made by one of the committee or an officer to verify statements of petitioners. Very often untruthful representations are made by indolent and shiftless persons, who are unwilling to care for their progeny. No encouragement is given in such instances. Proof of the urgency in each each is required, as many impositions are attempted.

Previous to admission each child is subjected to medical examination. in order to ascertain its condition of health, both of body and mind. Constant attempts are made to deliver to our care children afflicted with contagious diseases and mental and bodily ailments. The utmost care and scrutiny in this direction is necessary to avoid impositions. While bodily diseases are comparatively easily detected, mental defection is not so readily determined.

The following is extracted from a former report:

The committee has had to reject quite a number of children in consequence of impaired and defective intellect. These feeble-minded, dependent children are not fit subjects for the lunatic asylum, where if sent, they would, in many cases, become confirmed maniacs. A hospital for the treatment of bodily ailments is equally an unfit place, although many gravitate to one or the other of such asylums. Others, finding no suitable place for refuge, are left to wander about or are kept at home under baleful influences, and for some violation of law are committed to the Reform School or penal institutions, to associate with the vile and corrupt. In no sense are such minors criminals, and their classification as such or as lunatics is of itself a crime. In all well-regulated communities in the United States special provision is made, in common with other eleemosynary institutions, for the care, protection, and improvement of the condition of the feeble-minded. In this District there is a sad dereliction in this direction. Guardians and parents of feeble-minded children frequently make application for their admission into the Home Industrial School. It is manifestly improper to receive them therein as wards; they would demoralize the other inmates. The institution has no appliances for the treatment of such dependents. They require peculiar nurture, training, and education, under supervision of a person of experience in such matters; in fact, a specialist. Such children should not be intermingled indiscriminately with others of sound mind and unimpaired intellect; they certainly should not be cast among criminals and maniacs. Under proper treatment the feeble-minded are always improved, and often the defection is eradicated.

Many children have been admitted upon request of pastors of churches.

Inmates are discharged whenever parents or guardians desire to reassume their control. A large number of children, who have received education and training under our charge, have been provided with excellent places, and in most instances they give perfect satisfaction to their employers. Numerous testimonals to this effect have been received by the managers.

The daily average number of wards cared for during the year ending June 30, 1889, was $84\frac{1}{3}$.

Since June 30, 1888, up to the date of the present report (October 1, 1889), there have been admitted into the Home 64. Of these, 33 were boys and 31 girls. Forty-six have been discharged. Of these, 30 were boys and 16 girls.

The placement of boys was as follows: 12 returned to parents; 11 provided with homes and employment; 2 sent to learn trades; 1 sent to blind asylum at Baltimore; 1 remanded to Reform School for criminal incorrigibility, and 3 absconded.

The placement of girls was: 9 returned to parents; 6 provided with homes; 1 died in the institution.

Of those returned to parents, two were discharged because they had been surreptitiously introduced while suffering with infectious cutaneous diseases, and one afflicted with chronic nervous complaint.

HEALTH OF INMATES.

The following report of the physician of the institution conveys all that is necessary upon the subject. The managers cordially concur in his recommendation for provision of ample hospital accommodations. If new buildings are to be erected, suitable isolated wards or a complete separate structure will be of great benefit. The old quarters appropriated for hospital purposes having proven unsuitable, another portion of the house was selected, and two wards fitted up in the place of one.

Changes required by the health officer in the sewerage were made in February, 1889. The boys' bathing-room was cemented and a pump was connected to the spring.

The cement was presented by Mr. B. T. Janney.

PHYSICIAN'S REPORT.

GENTLEMEN AND LADIES: I have the honor to report, that during the past fiscal year, from June 30, 1888, to June 30, 1889, I paid sixty-five visits to the pupils of the school. The greatest number of visits was twenty-one, in September, 1888. The next was seventeen in March, and fifteen in January, 1889. In June and July, 1888, and May, 1889, there were no professional visits paid to the institution. In September, 1888, there was one death, Lydia Kepler, aged 9 years, who died of typhoid fever. The prevailing diseases during the year were diptheria and whooping-cough. The former was generally of a mild type, and easily manageable under the prompt and assiduous care of those in charge.

I have been unable to discover any local cause for the numerous cases of this disease, that is, numerous as compared with the average of other diseases.

From my observations in the surrounding country, I am inclined to think the cause is telluric rather than from bad local sanitary condition about the premises.

The next disease of importance with which we had to contend during the year was an outbreak of whooping-cough, of which there were a number of cases in March, 1889, and some with bad complications. The same prompt and assiduous care was exerted, and we are fortunate in recording no deaths from this cause.

This outbreak again forcibly pointed out to us the necessity of improved hospital accommodations at the institution.

These lessons should not go unheeded, lest contagious diseases steal in and become masters of the situation before we are ready for the battle.

Very respectfully,

J. F. R. APPLEBY, M. D.,
1430 *Thirty-Third St., Georgetown, D. C.*

BOARD OF MANAGERS, INDUSTRIAL HOME SCHOOL.

INDUSTRIES.

Instruction in the industrial branches has been continued on the same lines as heretofore.

Mr. Simmons has charge of the carpenter-shop, which has been supplied with new tools and six new work-benches. The old boiler and engine have been removed and renewed at an expense of $525.00 in excess of what was realized from the old boiler.

Early in the year new regulations were adopted by the committee on industries for the management of the shop, as follows:

REGULATIONS.

All the boys of suitable age in the institution shall receive instruction in the carpenter's shop. The instruction should be practical as well as theoretical, and besides the blackboard exercises and practice-work, the boys of sufficient age should be employed on two days of the week in assisting the carpenter in manufacturing articles for sale to help defray expenses.

They shall be organized for work or instruction into classes, which will be held from 8 to 11.30 in the morning, and 1 till 4.30 in the afternoon, on six days of the week.

Instruction shall be given in mechanical drawing, each pupil to receive an equivalent of from one to three hours' instruction per week. The text-books shall be such as are approved by the committee on industries and education.

The classes shall be so arranged in the carpenter's shop and in the greenhouse that boys may receive instruction in each branch in rotation, regard being had to the natural inclination of the pupils and the occupation which they propose to adopt.

The instructor in carpentering shall keep a record, in a suitable book or books, which shall contain—

(1) The names and ages of the pupils receiving instruction, the date when they joined the class, and date of leaving.

(2) An account of receipts and expenditures, showing materials received, tools purchased, etc., and articles sold, and the proceeds of sales.

An inventory of all tools, utensils, and property belonging to the carpenter's shop shall be made on the 1st day of January of each year.

The instructor shall make a report on the first of each month of the work of the preceding month, in duplicate, in the form prescribed, one copy to be kept by the superintendent, and the other to be sent to the committee on industries and education.

Articles of ornament or utility made by the pupils, under the direction of the carpenter, may at suitable times and under the superintendent's direction, be given to such of the pupils as may be deemed deserving of recognition for proficiency in the use of tools and in the general work of the shop.

The carpenter shall be employed nine hours a day, and while not engaged in teaching shall be occupied in the preparation of tools, in manufacturing such articles for sale as the superintendent shall deem most profitable, and in making the necessary repairs about the place.

The number of hours the carpenter is required to work has since been reduced to eight and a half.

The whole number of boys who have received instruction in this branch since January 1 is twenty-nine.

An account of receipts and expenses of the shop is furnished only for the six months ending June 30.

The expenses, including the wages of the carpenter at $50 per month, have been $579.61, and the receipts from sale of articles manufactured $215.17, making the net cost $364.44. At that rate the cost for the year would be about $700.

It may be remarked, also, that in the account of the carpenter shop the time and labor used in making repairs, which make quite an item, are not included in the receipts, making the actual expense less than appears by the figures.

Some of the boys have been allowed during the summer to go out and work occasionally at 50 cents a day, thus giving them an opportunity to earn a little money for themselves.

GREENHOUSE AND FARM.

The farm and garden have furnished a good supply of forage, vegetables, berries, etc., although owing to the unfavorable weather this season the farm work has been carried on under great difficulties.

The greenhouse has been repaired and improved, and is in good condition. There were 7,342 plants on hand January 1.

The boys who have been under the tuition of Mr. Bredemeier, the florist, have received a thorough training.

The net expense of this branch for six months ending June 30 has been $116.42; the expenses having been $396.54, and the receipts $280.12.

Considering that the greenhouse produced the early vegetables, such as tomatoes, cabbage, celery, egg-plant, lettuce, etc., and furnished plants for decorating the grounds, and much of the labor and time of the florist and of the boys under him have been employed in the vegetable garden, for which no account is made separately in the estimates of the revenue derived, it is thought that this branch has been self-sustaining.

The propagation of flowers and general education connected with the greenhouse, has been of great benefit. Several inmates have graduated so as to become practical florists, and easily procure remunerative positions. Most persons employed in kindred work in this vicinity are of foreign birth, and there is a growing demand for skilled artisans in floriculture.

Our superintendent says in one of her monthly reports:

The greenhouse boys are better trained to industrial work than any boys in the school. They have a thorough knowledge of their work as far as they have gone. A large percentage of the applications that we have for boys come from farmers, florists, and gardeners. I therefore recommend that every opportunity be given for the advancement of this branch of industry. My observation leads me to believe that working among flowers has an elevating, refining influence on the boys, and this

work not only teaches them how to make a living, but will in time give quite an income to the home.

To Mr. John Saul we are indebted for a donation of choice fruit-trees, which were planted last spring.

As the grounds of the Home are practically a governmental reservation, power should be given to the committee charged with this important and edifying branch of education to call on the Agricultural Department and Superintendent of Public Grounds, for seeds, plants, and such other material as may be necessary to properly cultivate the farm and garden.

Among the requisites for this branch of the work is a wagon and horse, for which provision should be made.

HOUSEKEEPING.

The food apportioned to the household is under the supervision of a committee of ladies, who take great interest in providing what is suitable and healthful. In the monthly requisitions of the superintendent they approve such articles as in their opinion are necessary. Milk is supplied from cows belonging to the home, and to this and other food, well prepared, may be traced the general excellent condition of the children under our charge, who frequently enter the home emaciated and with constitutions run down by reason of not having previously had sufficient nutriment.

As an example of the food provided, the following bills of fare for the months of September, 1888, March and July, 1889, are cited from the reports of the matron and housekeeper:

SEPTEMBER, 1888.

Breakfasts.—Hominy 9 times, oatmeal 9 times, butter 4 times, rice 1 time, chocolate 9 times, tomatoes 6 times, warm drink 20 times, bread 29 times.

Dinners.—Boiled beef or mutton 25 times, vegetable soup 2 times, potatoes 15 times, meat and potato hash 2 times, gravy 20 times, tomatoes 17 times, cabbage 5 times, squash 6 times, corn bread 3 times, pudding 2 times, baked apples 1 time, beans 1 time, beets 3 times, molasses 4 times, onions 1 time, apple-sauce 1 time, corn 1 time, rice 1 time. Bread at each meal.

Suppers.—Milk 25 times, rice 1 time, chocolate 4 times, cake 3 times. Bread at each meal.

MARCH, 1889.

Breakfasts.—Sunday and Thursday: Biscuit, butter, and chocolate. Monday, Tuesday, Wednesday, Friday, and Saturday: Chocolate and bread.

Dinners.—Sunday: Baked beans, rice. Monday: Sausage, potatoes, gravy. Tuesday: Vegetable soup, strawberries. Wednesday: Bean soup. Thursday: Corned beef, potatoes, lettuce. Friday: Roast pork, rice, strawberries. Saturday: Corned beef, potatoes, peas.

Suppers.—Sunday: Milk, tea, cake, and bread. Tuesday: Milk, tea, molasses, bread. Monday, Wednesday, Thursday, Friday, Saturday: Milk, tea, and bread.

JULY, 1889.

Bread and chocolate for breakfast every morning during the month, with butter every Sunday morning. Rye bread eight times, corned beef once, hash once, and scrambled eggs once.

For dinner during the month, vegetable soup 4 times, bean soup 4 times, baked beans 4 times, potatoes 10 times, beets 6 times, boiled cabbage 2 times, string-beans 5 times, slaw 2 times, apple-sauce 2 times, molasses 1 time, bacon 3 times, corned beef 3 times, roast beef and gravy 2 times, mutton and gravy 2 times.

Supper.—Bread, milk and tea every evening, blackberries once, molasses once, ginger-bread four times, during the month.

Most of the vegetables consumed are raised on the premises and this, added to the ample supply of fruit grown and cultivated by some of the inmates, is of great service in providing food.

Among the products of the farm are raspberries, peas, beets, string-beans, tomatoes, corn, potatoes, etc.

During the past year, chickens and hogs have been added to the live stock.

Every secular and religious holiday is suitably observed and celebrated and reasonable relaxation afforded the children on such occasions, which adds to their edification and enjoyment.

On last Thanksgiving Day they were provided with an excellent dinner, liberal donations therefor being received from Messrs. Luttrell & Wine, J. E. Libbey, M. C. Mitchell, Mayfield & Hieston, W. Nordlinger, B. Nordlinger, Buckey & Marbury, G. W. Offut & Bro., Weaver Bros., Mrs. Charles E. Foster, and Fred Stohman.

On Christmas week a public exhibition takes place.

When the exercises are closed a reception is held, under the direction of the lady managers, who distribute appropriate Christmas presents to every child. An ample Christmas dinner is provided, voluntary contributions therefor and for the presents to the children being made by friends of the institution.

On the Fourth of July patriotic exercises took place; a supply of fireworks was contributed by friends, and refreshments provided at the personal cost of our president, Mr. Gurley. We are also indebted to Mrs. Charles E. Foster for worsted and material for fancy work, and to Mr. Charles Bacon for Florida oranges.

These festivities involve no expenditures from funds appropriated for the support of the Home. Formerly we had a reserve fund at our command for the entertainment of the children.

Two benevolent gentlemen left bequests to the Georgetown board of aldermen, with directions to apply the revenue of the capital for the benefit of the children on festive occasions. The authorities of Georgetown fulfilled the trust, and periodically made appropriations in compliance with the directions of the testators. When, by the new government of the District, the Georgetown council was abolished, these funds were merged into the common treasury, and the intention of the donors has not been thenceforward carried out. As these were private gifts of individuals for a special purpose and from no part of public moneys, steps should be taken to restore the same to a trustee, to be applied for the purpose intended. A trust never lapses by incapacity of the trustee.

GIRLS' DEPARTMENT.

The cottage, which is a building separate from the main premises, is occupied exclusively by girls.

In the girls' industrial department regular classes of cookery, washing, ironing, and all kinds of housework have been maintained during the year.

The older girls help with the general house-work and assist the seamstress. With the assistance of the sewing-class there is made a variety of articles used at the Home, such as bed-spreads, pillow-cases, sheets, table-cloths, towels, besides most of the garments worn by the children.

Of this work a detailed report is made monthly to the board of managers.

In the report for the month of January, 1889, is the following:

Eight girls, age from eight to fourteen, take sewing lessons, and assist the seamstress every day. Six girls, from twelve to fifteen, take lessons in washing and ironing once a week, besides helping with the general house-work every day. Four lessons in darning and mending are also given each week and a working class on Saturday.

Some of the girls show much aptitude.

EMPLOYÉS.

On the 1st day of January, 1889, a change was made in the office of the superintendent, Mrs. K. B. Barlow being elected in place of Mr. W. S. Stockbridge.

Mrs. Barlow, having been connected with the Humane Society, Newsboys and Children's Aid Society, and similar organizations, brought great experience in training and treatment of youth, that peculiarly fitted her for the duties of her new position.

The board of managers cheerfully bear testimony to the faithful and conscientious manner in which Mrs. Barlow has performed the duties of her office since her incumbency.

The salaried officials are—

	Per year.
Mrs. K. B. Barlow, superintendent	$1,000
Miss M. N. Donavan, cottage matron	300
Miss N. D. Moote, seamstress	240
Miss J. P. Hughes, housekeeper	300
Mrs. M. A. Nokes, cook	120
Miss E. E. Mills, assistant	3[illegible]
Miss C. Danielson, nurse	180
Miss Kate Bannagan, laundress	180
Miss Annie Smackum, housemaid	120
Miss Rose Anderson, housemaid	60
Mr. J. A. Simmons, carpenter	600
Mr. E. Bredemier, florist	480
Mr. Paul Battle, farmer	240
Gross annual salaries of employés	3,856
To which add—	
Salary to clerk of treasurer	$100
Salary to secretary's clerk	100
	200
Total pay-roll	4,056

One of the above persons, with her family, was in the almshouse when it was appropriated to its present use, and they have been supported by our institution for many years.

Another one came into the Home as a ward.

EDUCATIONAL.

Of the public school on the premises the teachers in charge say:

The schools under our charge during the school year of 1888 and 1889 have been eminently prosperous. The average number in daily attendance during the year was 83; percentage of attendance, 98.3; whole number of pupils enrolled, 119.

The public-school curriculum has been followed.

The schools were visited by the supervising principal fourteen times, and by the superintendent two times.

JOHN W. DOUGLASS,
M. A. DOUGLASS,
Teachers.

During the vacation, for eight weeks, a temporary school was maintained, Miss Proctor being engaged at a weekly salary of $5.

A library has been started, 100 books having been presented by our president, and a number more through Dr. Peck and others. The children take great pleasure in spending their leisure hours in this useful department of the Home.

RELIGIOUS EDUCATION.

A well-organized Sunday-school is maintained. The teachers at the Home are assisted by Mr. Gurley, our president; Mrs. Blackford, Miss Anna Blackford, Dr. Peck, Miss Proctor, Mrs. C. E. Nourse, and other volunteers.

FINANCIAL.

The appropriation of $15,000, recommended by the Commissioners, is necessary for the maintenance of the establishment.

The average number of wards, teachers, and employés make a family of one hundred and five.

Experience has demonstrated that to clothe and feed the children involves an annual per capita expenditure of about $110.

The report of the treasurer sets forth, with vouchers attested by the finance committee, every item of expenditure in detail.

The estimate of per capita expense includes the board of all teachers and assisants residing on the premises, besides fuel, light, payment to the physician, and support of school during the summer vacation.

LEWIS ABRAHAM,
J. P. T. TUPPER,
Committee on Report.

ADDENDA.

From testimonials received the following few are selected as evidence of the work of the institution:

Annie Roach, an inmate, aged eight years, was a successful competitor, among 22,000 scholars of the first grade in the public schools, for the gold medal given by the Post for the best English composition. Her production was found worthy of publication in the Post and Star newspapers.

Elam Behrend writes from Prince George's County "that the boy, Ottoway Roach, whom I took from the Industrial Home School, is well and has behaved well. Since he has been with me he has attended school attentively."

COMMITTEE ON FINANCE, UNITED STATES SENATE,
August 19, 1889.

MY DEAR SIR: I trust you will pardon the delay in reporting to you the progress made by your late protégé, Willie Lehman.

He is a manly fellow in every sense, proving honest, trustworthy, and very intelligent. We find him useful wherever he is placed, and certainly if you turn out such material from your Home you are indeed doing great good to the community.

Very truly, yours,

C. STRAUSS & Co.

DEPARTMENT OF AGRICULTURE,
OFFICE OF ASSISTANT SECRETARY,
Washington, D. C., September 28, 1889.

DEAR SIR: In response to your inquiry concerning the work, progress, and behavior of Sarah Sweeney and Nina Crain, I take pleasure in stating that they have given very good satisfaction in their work in the Government filature. Miss Sarah Sweeney was sent as reeler to the Cincinnati Exposition, and while there succeeded in the work assigned her.

An institution that will train dependent children and teach them industries so that they will be enabled to make an honorable livelihood is worthy of public support.

Yours, truly,

HELEN GARDNER,
Assistant, in Charge.

LEWIS ABRAHAM, Esq., *Washington, D. C.*

[Gore, Janney & Co., manufacturers of national document files.]

929 F STREET, NORTHWEST,
Washington, D. C., September 15, 1889.

DEAR SIR: In reply to your inquiry we will state we had on exhibition work from the Industrial School of Georgetown, and will give the boys credit for doing very nice work, and recommend it to be encouraged by the general public as being an institution that we believe is of much benefit to the young lads of our city.

Respectfully,

GORE, JANNEY & CO.

Mr. LEWIS ABRAHAM.

TREASURER'S REPORT.

WASHINGTON, D. C., *September* 12, 1889.

MY DEAR SIR: I would herein most respectfully present for your consideration my first annual report as treasurer of the Industrial Home School. The amount appropriated by the Congress of the United States for the maintenance of the Home, $10,000, was expended as follows, viz:

Bread	$1,035.67	Hardware	55.30
Blacksmithing	25.37	Lumber	160.77
Clothing	176.78	Meat	516.61
Dry goods	417.57	Milk	5.60
Drugs	104.44	Miscellaneous	652.36
Fuel	707.60	Shoes	421.67
Feed	315.54	Salaries	4,083,78
Garden seeds, etc	44.82		
Groceries	1,276.12	Total	10,000.00

The amount appropriated for the purpose of repairing and restocking the greenhouse, which was burned partially, and for a new boiler for the shop, $1,500, has all been expended, as is shown in the accompanying "Abstract of disbursements," No. 1.

There was left, after the death of my predecessor, Mr. W. W. Curtis, an unexpended balance of the appropriation for the "Maintenance of the Industrial Home" for the years 1887 and 1888 amounting to $324, which was put to my credit in the United States Treasury, and it was used in paying outstanding bills incurred during the year for which it was appropriated, as follows:

Clothing	$21.25	Lumber	$17.83
Drugs	8.87	Milk	20.80
Fuel	155.10	Shoes	82.04
Hardware	14.09		
Horseshoeing	4.00		323.99

Leaving a balance in the United States Treasury of 1 cent.

It has been the custom of the board of managers to keep a small bank account, the funds of which accrued from the sale of the results of the industries taught at the institution in the shape of tree-boxes, tables, etc., made by the boys, and flowers from the greenhouse, and which furnished needed assistance in eking out the meager appropriations made by the Congress for the support of the inmates of the Home; but since tree-boxes are no longer used, except in rare instances, this source of revenue is much reduced. I found to the credit of this fund in the Second National Bank of Washington $122.01; received during the year $1,049.70; total amount, $1,171.71; of which, as shown in the accompanying "Abstract of disbursements," No. 2, there have been expended $1,139.55; leaving now a balance of $36.16 in the Farmers and Mechanics' National Bank, to which, by order of the board of managers, the account was transferred.

FUNDS RECEIVED.

Balance in United States Treasury July 1, 1888	$324.00
Balance in Second National Bank	122.01
From sales during the year	1,049.70
Membership fees	38.00
Congressional appropriation	10,000.00
Total	11,533.71
Expenditure, per abstract herewith	11,501.54
Balance on hand	32.17

In closing this report I would beg leave to suggest that for the action of Congress at its next session your honorable board recommend for the general maintenance of the inmates of the Industrial Home an appropriation of $12,500; for the encouragement of "industries," which, owing to the small amount of money, have heretofore been much neglected, $2,000; and for a small hospital, which is urgently needed, $800; making a total amount of $15,300.

Respectfully submitted.

B. T. JANNEY,
Treasurer.

Mr. W. B. GURLEY,
President Board of Managers Industrial Home School.

No. 1.—*Abstract of disbursements by B. T. Janney, treasurer, on account of the appropriation for the Industrial Home School of the District of Columbia during the year ending June 30, 1889.*

Nature of purchase or expenditure.	Amount.	Nature of purchase or expenditure.	Amount.
Hauling boiler	$7.50	Plants	$21.80
Boiler	331.28	Plumbing	49.55
Plants	36.80	Flower-pots	13.50
Lumber	12.90	Plants	7.77
Do	103.54	Greenhouse pipes	4.85
Do	41.32	Plumbing	23.15
Plumbing	14.00	Pipe fitting	.60
Paints, etc	90.50	Flower-pots	7.13
Brick	34.00	Engine and boiler	525.00
Hardware	40.05	Glazing	30.00
Do	10.26	Paints, etc	26.50
Green house pipe	39.45		
Flower-pots	16.35	Total	1,500.00
Do	12.20		

No. 2.—*Abstract of disbursements by B. T. Janney, treasurer, on account of the appropriation for the Industrial Home School of the District of Columbia during the year ending June 30, 1889.*

Nature of purchase or expenditure.	Amount.	Nature of purchase or expenditure.	Amount.
Teacher of manual training	$40.00	Groceries	$6.45
Bread	96.17	do	7.60
Physician	40.00	Dry goods	37.92
Dry goods	23.40	Drugs	2.05
Butter	16.52	Crockery	3.70
Bread	95.19	do	3.15
Meat	60.50	Greenhouse pipes	2.75
Do	58.46	Seeds, etc	1.20
Butter	7.50	Drugs	2.05
Coal	38.45	Repairing carriages	7.25
Drugs	8.55	Hardware	10.45
Horseshoeing	5.50	Coal	34.00
Do	1.50	Lumber	3.05
Repairing stoves	2.70	Horseshoeing	3.00
Christmas dinner, voluntarily contributed by members	38.00	Lumber	98.60
		do	32.59
Stationery	9.45	Repairing shoes	3.25
Repairing boiler	30.33	Hardware	4.81
Dry goods	19.00	Drugs	15.65
Stationery	6.05	Clothing	16.50
Gas-fitting	11.25	Hats	2.00
Hats	12.50	Drugs	5.15
Do	13.00	Seeds, etc	2.80
Lime	2.35	Shoes	21.65
Repairing machine	2.09	Bread	75.79
Printer	5.75	Wood	4.22
Services as secretary	50.00	Repairing harness	3.70
Fertilizer	20.25		
Dry goods	7.91	Total	1,139.55
Groceries	5.25		

WASHINGTON, D. C., *September* 12, 1889.

GENTLEMEN: On behalf of the board of managers of the Industrial Home School of the District of Columbia, and in pursuance of your personal suggestions made to me this morning at your office, I would request that the following recommendations and indorsements be made by you, in your estimates for expenditures and appropriations for the Industrial Home School for the coming fiscal year, to wit:

For maintenence of the school with one hundred children	$12,500
For material for industrial labor and for necessary repairs	2,000
For small hospital building for the institution	500
For fuel, fireman's services, and care of heating apparatus	1,000
Total appropriation for next fiscal year	16,000

I had the pleasure of explaining to you personally the necessity and reasons for these appropriations, which will be explained more in detail in the annual report of the board, which can not be prepared and approved until our next monthly meeting, to be held on the 8th of October next.

In this I have complied with your suggestions, that a brief statement of the estimate for appropriation should be furnished you immediately for your recommendation, if approved, in your general estimates for the coming year, which, as you informed me, must be made before the next meeting of our board.

Hoping this will meet with your approval and favorable action,

I remain, very respectfully, your obedient servant,

O. D. CONGER,
Vice-President of the Board,
and Chairman of the Committee on Legislation.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 4.

TEMPORARY HOME FOR EX-UNION SOLDIERS AND SAILORS.

DEPARTMENT OF THE POTOMAC, G. A. R.,
Washington, D. C., September 5, 1889.

GENTLEMEN: I have the honor to acknowledge the receipt of a circular letter, requesting that an estimate be furnished to your honorable body for the support of this charity for the fiscal year ending June 30, 1891. The board of management, so far as past experience has demonstrated and in view of logical probabilities in the near future, make the following estimate, and take into consideration the increase pension claims, tending to increase the numbers visiting the city with such claims far beyond preceding years. Our accommodations can cover thirty inmates. Inmates receive two meals a day each (including superintendent, wife, and help—two servants). This would call for 24,820 single meals during the year.

On this item alone we may go astray; hence we estimate one-third less, twenty inmates per day, as the basis of calculation.

ESTIMATE.

Meals:	
Twenty inmates, two meals each daily for one year	14,600
Employés, four meals each daily for one year	2,920
Total	17,520
Which at, say, 15 cents per meal, amounts to	$2,628.00
Rent of building per annum	420.00
Wages to help	360.00
Fuel, $100; gas and water-tax, $100	200.00
Furniture, bedding, towels, etc	250.00
	3,858.00

In view of the fact that one-third has been deducted from the amount of meals we have every reason to believe will be approximated (21,900, the calculation above being 7,300 less), the board of management will feel warranted in praying for an increase, making the appropriation $4,500 for the fiscal year ending June 30, 1891.

Very respectfully,

THOMAS R. TURNBULL,
Secretary.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 5.

YOUNG WOMAN'S CHRISTIAN HOME.

WASHINGTON, D. C., *September* 13, 1889.

GENTLEMEN: In accordance with your request of August 1, we have the honor to submit as the estimate of the amount required for the conduct and support of the Young Woman's Christian Home, for the fiscal year ending June 30, 1891, $5,000.

During the fiscal year ending June 30, 1889, the Home has been sustained by moneys and merchandise contributed by very many of the benevolent citizens of the District.

The amount of money received from all sources during the year has been....		$840.10
The expenditures have been:		
For rent	$364.80	
For compensation of superintendent	190.00	
For marketing	171.30	
For cook, fuel, stationery, and sundries	96.83	
		822.93
Balance on hand July 1, 1889		17.17

The number of young women admitted to the Home and provided for for periods ranging from one to ten days has been 234. Number of meals furnished to transient poor, 76. Number of young women for whom employment could not be provided and who were furnished means to return to the places from which they came, 3.

The trustees are indebted to a large number of merchants, dealers, and other citizens for necessities of all kinds, including dry goods, house-furnishings, groceries, marketing, fuel, and table-furnishings of all kinds, the money value of which can not be estimated, but without which the increased number of inmates could not have been properly cared for.

The number of inmates from July 1, 1888, to June 30, 1889, was 112 greater than from October 1, 1887, when the Home was opened, to November 1, 1888. The number of meals furnished to transient poor during the same periods was 58 greater.

During the quarter ending September 30 the Home has had the benefit of one-fourth of $1,000, appropriated by the last Congress toward its support for the fiscal year ending June 30, 1890.

The house in which it is situated, No. 323 C street, northwest, is not suited for the purposes of the Home, although the sleeping rooms by overcrowding can accommodate as many as fifteen inmates.

It is the hope and expectation of the trustees that the Home may soon be removed to a larger and more suitable house.

There has been no case of serious illness at the Home.

We remain, very respectfully, your obedient servants,

ANNA A. SHELLABARGER, *President.*
W. H. MILLS, *Secretary.*
D. PERCY HICKLING, M. D., *Treasurer.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 6.

WOMAN'S CHRISTIAN TEMPERANCE UNION.

WASHINGTON, D. C., *September* 30, 1889.

GENTLEMEN: The treasurer of Woman's Christian Temperance Union begs leave to submit the following report of receipts and expenditures for the quarter ending September 30, 1889:

RECEIVED.

Appropriation from Congress	$250.00	
Donations from various sources	198.17	
Amount to balance	29.00	
		$477.17

EXPENDED.

House rent	$97.50	
Matron's salary	67.50	
Gas	6.28	
Coal, not donated	5.75	
Table expenses	250.64	
Ice	19.50	
Incidentals	30.00	
		$477.17
Deficit		29.00

Respectfully submitted.

ANNA C. MCDOWELL,
Dist. Treasurer.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 7.

COLUMBIA HOSPITAL.

COLUMBIA HOSPITAL,
Washington, D. C., August 5, 1889.

GENTLEMEN: In the absence from the city of the president of the board of directors of the hospital, Rev. R. R. Shippen, I have the honor to transmit to you the annual reports of the treasurer and surgeon in charge.

Hoping that the same may meet with your approval, I am,
Very respectfully,

M. W. BEVERIDGE,
Secretary.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

COLUMBIA HOSPITAL FOR WOMEN,
Washington, July 26, 1889.

GENTLEMEN: I have the honor to submit for the information of the Commissioners of the District of Columbia the following report of receipts and disbursements on account of Columbia Hospital, during the fiscal year ending June 30, 1889, with an estimate of the amount required for the support of the hospital during the fiscal year ending June 30, 1891:

RECEIPTS.

By amount appropriated for buildings, etc., Columbia Hospital, act of July 18, 1888	$11,300.00	
By amount appropriated for care of Columbia Hospital, etc., act of July 18, 1888	15,000.00	
By balance on hand from pay-patient fund, July 1, 1888	839.06	
By amount received from pay patients during year	7,142.00	
Total		34,281.06

EXPENDITURES.

Items.	Appropriation for fiscal year.	Building, etc.	Pay-patient fund.	Total.
Salaries	$2,600.00	.....	$600.00	$3,200.00
Pay-rolls, services nurses, etc	4,013.17	.....	.....	4,013.17
Marketing	829.26	.....	557.30	1,386.56
Use of telephone	20.00	.....	80.00	100.00
Gas	51.28	.....	474.01	525.26
Fuel and forage	1,626.91	.....	46.78	1,673.69
Ice	324.16	.....	102.11	426.27
Groceries and provisions	4,207.37	.....	1,362.06	5,569.43
Improvements, repairs, furniture, housekeeping supplies	926.05	$1,100.00	1,143.72	6,169.77
Books, journals, stationery, printing	83.55	.....	59.75	143.30
Medical and surgical supplies	318.28	.....	413.22	731.50
Insurance	.....	.....	51.25	51.25
Incidentals	.....	.....	188.00	188.00
Total expended	15,000.00	4,100.00	5,078.20	24,178.20
Balance on hand July 1, 1889	.....	7,200.00	2,902.86	10,102.86
Total	15,000.00	11,300.00	7,981.06	34,281.06

Contracts have been made for improvements to the building, which will exhaust at a very early day the entire amount of funds available on July 1, 1889, from the building appropriation and pay-patient fund.

Work upon these improvements is now well advanced.

For the necessary support of the hospital for the fiscal year ending June 30, 1891, the sum of $20,000 will be required.

I am, gentlemen, very respectfully, your obedient servant,

JOHN M. WILSON,
Treasurer Columbia Hospital.

The BOARD OF DIRECTORS COLUMBIA HOSPITAL.

JULY 1, 1889.

GENTLEMEN: The accompanying statistical report of the hospital for the fiscal year ending June 30, 1889, fully explains the amount of work performed and the results obtained. As is shown, the number of patients treated is in excess of any year since the foundation of the institution, and proves that the hospital fulfills the expectations which under your guidance it ought to achieve. There have been treated 463 patients, of whom 421 were discharged during the year. Fifty-four operations were performed, including the various affections occurring in patients suffering from diseases peculiar to women, with a result that at least is gratifying and propably of sufficient importance to call attention to the minute details of the cases, and a synopsis of which, taken from the records, will be found in an article to be published in the Cincinnati Obstetric Gazette in September.

The amount of labor involved in the treatment of such cases as are admitted to this hospital can not be too highly appreciated, as it requires all the energies of skilled assistants and trained nurses to prevent the spread of disease and save life.

The assistants, when they have obtained sufficient knowledge of this branch of medicine, find it expedient to seek a more profitable position outside of the hospital, and hence skilled assistants without pay are difficult to secure. I would therefore recommend that the senior assistant receive a salary commensurate with his services, in order that the inmates of the hospital shall be at all times under the immediate care of a skilled physician.

There were six deaths during the year—two in the lying-in depart-

ment and four in the medical and surgical department. Of the two deaths occuring in the lying-in ward, one was due to typho-malarial fever. The patient was admitted in labor and had been suffering with intermittent fever for several months. The other death was due to a fibro-sarcomatous tumor of the uterus, together with fatty degeneration and dilatation of the heart, complicating labor.

In the medical and surgical department the immediate cause of death in three cases was exhaustion. The first was a case of cancer of the rectum, the second sarcoma of the uterus, and the third followed a laporatomy for removal of the uterine appendages for double pyosalpinx, three days after the operation. The fourth case was due to organic heart disease.

It will be seen that of the six deaths occurring during the year, five resulted from incurable diseases and one was the result of septic infection depending upon the condition of the patient.

One thousand two hundred and forty-five patients were treated in the dispensary during the year. This department is steadily growing in its field of usefulness and is rendering incalculable service to the deserving poor.

In conclusion, I beg to state that for attention to duty and fidelity to the care of the sick, I can not speak too highly of the resident assistants, nurses, and employés.

P. J. MURPHY,
Surgeon in Charge.

The BOARD OF DIRECTORS OF COLUMBIA HOSPITAL.

Patients in the hospital July 1, 1888	43
Patients admitted during the year	420
Total treated during the year ending June 30, 1889	463
Color:	
White	270
Colored	193
	463
Discharged during the year	421
Died during the year	6
Remaining under treatment July 1, 1889	42
Prescriptions compounded during the year	2,637
Death rate per cent. during the year	1.29+

NATIVITIES.

Alabama	1	Wisconsin	2
California	1	New Jersey	1
Canada	1	New York	11
Connecticut	1	North Carolina	8
Delaware	1	Ohio	8
District of Columbia	74	Pennsylvania	13
England	6	Scotland	2
Florida	1	South Carolina	3
France	1	Sweden	1
Georgia	5	Tennessee	3
Germany	11	Texas	2
Illinois	1	Unknown	2
Ireland	22	Vermont	1
Italy	2	Virginia	166
Kentucky	7	West Indies	1
Louisiana	3	West Virginia	2
Maine	2	Wisconsin	1
Maryland	91		
Massachusetts	4		
Michigan	1		463

STATES OR COUNTRIES.

Alabama	1	Pennsylvania	8
District of Columbia	316	South Carolina	2
Florida	1	Tennessee	3
Georgia	1	Texas	1
Illinois	1	Unknown	1
Indian Territory	1	Vermont	1
Kentucky	4	Virginia	54
Maryland	47	West Virginia	1
Massachusetts	2	Wisconsin	2
Missouri	1		463
New York	5		
North Carolina	10		

Medical and surgical cases, 1888–'89.

Diseases.	Cured.	Relieved.	Incurable or unrelieved.	Unknown.	Died.	In house.	Total.
Abscess of labium majus	1						1
Abscess, mammæ	3						3
Abscess, pelvic	3	2					5
Abscess, pelvic, chronic	2	1					3
Adenoma, mammæ	2						2
Amenorrhœa from anæmia		1		2		1	4
Anæmia	1	2					3
Anæmia with pregnancy	1						1
Antiplexion		1					1
Antiplexion and chronic endocervicitis						1	1
Anteversion	1	1					2
Anteversion and chronic endometritis						1	1
Cancer of the rectum *					1		1
Carcinoma of the right ovary	1						1
Carcinoma of the uterus			1				1
Cellulitis, pelvic	2	3		1			6
Cellulitis, pelvic, chronic	1	1				1	3
Cellulitis, pelvic, with pregnancy	1						1
Chlor-anæmia	1	3					4
Cyst of labium majus	2						2
Cyst of vagina	1						1
Cyst of vulvo-vaginal gland	1						1
Cystitis, chronic		1		2			3
Cystocele	2	1					3
Cystocele and laceration of cervix and perinæum						1	1
Cystocele and laceration of perinæum	1						1
Dermoid cyst of right ovary	2						2
Dysmenorrhœa	1	1					2
Emansio-mensium				1			1
Endocervicitis	2	7		1			10
Endocervicitis, chronic		2					2
Endocervicitis and laceration of cervix	1	2					3
Endocervicitis and stenosis of cervical canal						2	2
Endometritis	2	1					3
Endometritis, chronic	2	3					5
Endometritis and laceration of cervix		2				1	3
Endometritis and retroversion	1	1					2
Epiplocele (?)	1						1
Epithelioma of cervix	1						1
Epithelioma of cervix (incipient)						1	1
Epithelioma of lip	1						1
Fibro-cyst of uterus (?)				1			1
Fibroma uteri		16		2		1	19
Fibro-osteoma of pelvis		2					2
Hæmorrhoids	1	1					2
Hysteria	2			1			3
Hysteria with pregnancy						1	1
Intraligamentary cyst	1						1
Laceration of cervix	3	1					4
Laceration of cervix and perinæum	1						1
Laceration of perinæum	5	2				2	9
Menopause	1	7					8
Meteorism	1						1
Metritis, chronic		5				1	6
Metritis, chronic, and laceration of the cervix	1	3		1			5

* Died of exhaustion.

Medical and surgical cases, 1889–'89—Continued.

Diseases.	Cured.	Relieved.	Incurable or unrelieved.	Unknown.	Died.	In house.	Total.
Metritis, chronic, and laceration of the cervix and perinæum	.....	2	.....	.....	.....	1	3
Metritis, chronic, and retroflexion	.....	.....	.....	.....	.....	1	1
Metritis, chronic, and retroversion	2	1	.....	.....	.....	.....	3
Non-developed uterus	1	.....	.....	.....	.....	1	2
Ovarian neuralgia	.....	1	.....	.....	.....	.....	1
Ovarian tumor (unilocular)	.....	.....	.....	.....	.....	1	1
Ovaritis, chronic	.....	1	.....	.....	.....	.....	1
Peritonitis and cellulitis, pelvic	1	.....	.....	.....	.....	.....	1
Polypus of uterus	.....	1	.....	.....	.....	.....	1
Prolapsus uteri†	.....	.....	.....	.....	1	.....	1
Prolapsus uteri and cystocele	.....	1	.....	.....	.....	.....	1
Pruritus vulvæ	1	1	.....	.....	.....	.....	2
Pyoselpinx, double‡	.....	.....	.....	.....	1	.....	1
Rectitis	.....	1	.....	.....	.....	.....	1
Retroflexion	.....	1	.....	.....	.....	.....	1
Retroversion	1	9	.....	.....	.....	.....	10
Retroversion and cellulitis	1	.....	.....	.....	.....	.....	1
Retroversion and prolapsed ovary	.....	.....	.....	.....	.....	1	1
Retroversion and laceration of cervix	.....	2	.....	.....	.....	.....	2
Sarcoma, uteri	.....	.....	.....	1	*1	.....	2
Scirrhus, mammæ	2	1	.....	.....	.....	.....	3
Spurious pregnancy	1	.....	.....	.....	.....	.....	1
Stricture of urethra	1	.....	.....	.....	.....	.....	1
Subinvolution and cellulitis	.....	.....	.....	.....	.....	1	1
Subinvolution and anteflexion	.....	.....	.....	.....	.....	1	1
Subinvolution and retroversion	.....	1	.....	.....	.....	.....	1
Threatened abortion	2	.....	.....	.....	.....	.....	2
Umbilical hernia	.....	.....	.....	1	.....	.....	1
Vaginitis	1	.....	.....	.....	.....	.....	1
Vesical irritability	1	.....	.....	.....	.....	.....	1
Vesico-vaginal fistulæ	1	1	.....	2	.....	.....	4
Vomiting of pregnancy, obstinate	1	.....	.....	.....	.....	.....	1
Not subject	.....	.....	.....	.....	.....	.....	15
Unknown (no examination made)	.....	.....	.....	.....	.....	.....	1
Total	73	98	3	16	4	20	229

Operations for fiscal year 1888–'89.

Abscess of labium majus	1	.....	.....	.....	.....	.....	1
Abscess mammæ	2	.....	.....	.....	.....	.....	2
Abscess, pelvic	4	.....	.....	.....	.....	.....	4
Abscess, pelvic, chronic (laparotomy)	1	.....	.....	.....	.....	.....	1
Adenoma, mammæ	1	.....	.....	.....	.....	.....	1
Carcinoma of ovary (laparotomy)	1	.....	.....	.....	.....	.....	1
Cyst of labium majus	2	.....	.....	.....	.....	.....	2
Cyst of vagina	1	.....	.....	.....	.....	.....	1
Cyst of vulvo-vaginal gland	1	.....	.....	.....	.....	.....	1
Cystocele	2	.....	.....	.....	.....	.....	2
Dermoid cyst of ovary (laparotomy)	2	.....	.....	.....	.....	.....	2
Epithelioma of cervix uteri	1	.....	.....	.....	.....	.....	1
Epithelioma of lip	1	.....	.....	.....	.....	.....	1
Hæmorrhoids	1	.....	.....	.....	.....	.....	1
Intraligamentary cyst (broad ligament) (laparotomy)	1	.....	.....	.....	.....	.....	1
Laceration of cervix	3	.....	.....	.....	.....	.....	3
Laceration of perinæum (primary)	9	.....	1	.....	.....	2	12
Laceration of perinæum	6	1	.....	.....	.....	2	9
Lipoma of umbelicus (epiplocele?)	1	.....	.....	.....	.....	.....	1
Pyosalpinx, double (laparotomy)§	.....	.....	.....	.....	§1	.....	1
Scirrhus, mammæ	2	1	.....	.....	.....	.....	3
Stricture of urethra	1	.....	.....	.....	.....	.....	1
Unilocular cyst of ovary (laparotomy)	.....	.....	.....	.....	.....	1	1
Vesico-vaginal fistula	1	.....	.....	.....	.....	.....	1
Total	45	2	1	.....	1	5	54

* Died of exhaustion. † Death resulted from heart disease (mitral regurgitation).
‡ Death resulted from septicæmia following operation. § Died of septicæmia three days after operation.

OBSTETRICAL REPORT.

Patients in the hospital July 1, 1888:	
Delivered	6
Undelivered	11
Admitted during the year	217
Total to be accounted for	234
Discharged after delivery	189
Left undelivered	21
Died	2
In hospital July 1, 1889:	
Delivered	12
Undelivered	10
	234
Maternal mortality	2
Cause of:	
Typho-malarial fever, died twelve days after delivery*	1
Fibro-sarcoma of uterus, dilatation and fatty degeneration of heart, complicating labor	1
Infantile mortality	15
Cause of:	
Patulous foramen ovale—asphyxia	3
Premature birth—debility†	5
Atelectasis pulmonalis	2
Icterus neonatorum	1
Infantile convulsions	1
Marasmus—exhaustion‡	3
Still-births	8
Cause:	
Antepartal detachment of placenta	1
Unknown (macerated)	4
Protracted labor	2
Syphilis	1
Patients delivered during the year	188
Admitted after delivery	4
	192
Sex of children:	
Males	102
Females	92
	194
Premature births	8
Abortions	5
Breech presentation	6
Footling	1
Footling and prolapsus funis	1
Funis, elbow and foot	1
Hand, with head	3
Posterior occipital presentation, with posterior rotation	3
Placenta prævia marginalis	1
Post portal hemorrhage	8
Puerperal septicæmia	9
Puerperal eclampsia, ante portal and post portal	1
Hystero-epilepsy, post portal	1
Fibroid tumor, complicating labor	1

*Patient admitted in labor with history of malarial fever and several days after delivery symptoms of typhoid fever set in.

†Two at 5½ months' gestation; one lived 3 hours and the other 1½ hours.

‡One at 6½ months' gestation; lived 22 days.

Fibro-sarcoma uteri and dilatation of heart with labor	1
Anterior posterior curvature of spine and complete anteversion	1
Mitral and aortic insufficiency	1
Mitral insufficiency and œdema of lungs	1
Mammary abscess	2
Retained membranes	2
Ophthalmia neonatorum	2
Vaginal hemorrhage in infant	1
Cases of twins	2
Forceps at inferior strait	5
Forceps at superior strait	3
Wet nurses supplied	3

HOSPITAL DISPENSARY REPORT FOR FISCAL YEAR 1888–'89.

COLUMBIA HOSPITAL FOR WOMEN,
Washington, D. C.

SIR: We have the honor to submit the following report of Columbia Hospital Dispensary for the fiscal year ending June 30, 1889.

Very respectfully,

JNO. F. MORAN, M. D.,
WM. D. HORIGAN, M. D.,
Resident Assistants.

P. J. MURPHY, M. D.,
Surgeon in Charge.

Patients under treatment at date of last report		177
Patients received		1,068
Total to be accounted for		1,245
Discharged:		
Cured	77	
Relieved	311	
Unrelieved or incurable	2	
Unknown (did not return)	346	
Sent to hospital from dispensary	175	
Sent to other institutions	152	
Under treatment July 1, 1889	182	
		1,245
Prescriptions compounded		3,170

Report of Columbia Hospital for Women and Dispensary, Washington, D.C., for year ending June 30, 1889.

	Hospital.	Dispensary.	Total.
Number of patients under treatment at date of last report	43	177	220
Number of patients received	420	1,068	1,488
Total treated	463	1,245	1,708
Number cured	282	77	359
Number relieved	97	311	408
Unrelieved or incurable	3	2	5
Unknown	37	346	383
Not subjects for treatment	15	152	167
Died	6		6
Sent to hospital from dispensary		175	175
Sent to other institutions		152	152
Number under treatment at date of this report	42	182	224
Births	188		188
Prescriptions compounded	2,637	3,170	5,807

F 8.

WOMEN'S CHRISTIAN ASSOCIATION.

WASHINGTON, D. C., *September* 11, 1889.

SIR: It would be very difficult to give a detailed statement of the operations and work of the Women's Christian Association, as the work is so varied yet general.

A statement of receipts and expenditures for the year ending June, 1889, you will find inclosed with this. Also a printed report of the managers for the year 1888.

By the report of the reception committee to the Women's Christian Association, of those admitted in 1888 we find two hundred and fifty-three different women were cared for in the Home during the year. This is about the yearly average, the building accommodating fifty-two adults.

The regulation of the association provides that six old ladies be admitted for life by paying $100. Their places again filled when a vacancy occurs. The others consist of old, young, and middle-aged working women who can pay a small amount for board, women with pensions, and women who have friends or church who help them to pay in part for their board and home, while more women who have no home or friends and who can pay nothing are taken in and cared for than any other class. Many of these are sent to us by the District officers and by the Associated Charities. No poor woman is sent from the doors without something being done for her, sometimes paying for lodgings elsewhere when there is no room in the Home.

The estimate of the amount required for the conduct and support of the Women's Christian Association for the year ending June 30, 1891, is $5,000.

Increased capacity with an increased appropriation would greatly increase our efficiency. To this end we are endeavoring to add slowly to a building fund and for which we have heretofore asked Congress to aid us by an appropriation to erect an addition to the present building, in which we would solicit your earnest co-operation.

In the absence of the secretary.

Respectfully submitted by

S. P. FRENCH,
Chairman of Home Committee.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Report of the treasurer of the Women's Christian Association, Washington, D. C., for the fiscal year ending June 30, 1889.

RECEIPTS.

Balance of Government appropriation on hand July 1, 1888	$153.92	
Amount of Government appropriation received during the year ending June 30, 1889	4,000.00	
		$4,153.92
Received from other sources as follows, viz:		
Balance of private funds July 1, 1888	2,527.52	
Amount received for board	2,831.48	
Amount received from register	164.50	
Donations	83.50	
Church collections	216.62	
Admission fees of life inmates	220.00	
Women's Exchange (as auxiliary branch)	200.98	
Miscellaneous	22.02	
		6,266.62
Total		10,420.54

EXPENDITURES.

Table expenses	$3,633.69	
Matron's contingent expenses	205.00	
Wages	1,028.50	
Fuel	489.40	
Gas	152.38	
Outside relief	310.00	
House repair	488.40	
House furnishing	589.58	
Clothing	84.04	
Drugs and medicines	119.45	
Nursing, etc	19.70	
Ice	30.29	
Funeral expenses	20.00	
Insurance	40.00	
Printing and blank books	39.00	
Special tax for paving alley	38.58	
Miscellaneous	3.37	
Building fund	2,500.00	
		$9,791.38
Balance in hands of U. S. Treasurer, June 30, 1889		
Balance of private funds June 30, 1889	629.16	
		629.16
Total		10,420.54

DELIA A. FREEMAN,
Treasurer Women's Christian Association.

F 9.

HOME FOR DESTITUTE COLORED WOMEN AND CHILDREN.

WASHINGTON, D. C., *August* 26, 1889.

GENTLEMEN: I have the honor to submit the following estimate for the maintenance of the Home for Destitute Colored Women and Children for the year ending June, 1890. For subsistence, fuel, repairs, furniture, clothing, medicines, and miscellaneous expenses, $10,000.

This estimate does not include the support of the colored foundlings, which this institution was asked to provide for last year, and for which $1,000 was appropriated. To provide for the Home properly with its present inmates there should be an appropriation of $10,000.

There are one hundred and twenty children and ten aged women in the Home. The cost of supporting them is about 19 cents per day per capita. This includes care, fuel, light, clothing, etc., and you will observe is a very small sum.

Very respectfully,

ANNIE M. PURVIS,
Secretary pro. tem. of the National Association for the Relief of Destitute Colored Women and Children.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF THE TREASURER.

WASHINGTON, D. C., *August* 24, 1889.

GENTLEMEN: I have the honor to submit the following statement of receipts and expenditures of the Home for Destitute Colored Women and Children for the year ending June, 1889:

RECEIPTS.

By appropriation from Congress	$10,000.00

EXPENDITURES.

Pay-roll	2,716.06
Current expenses	245.00
Gas	102.14
Yarn, cotton, etc	33.83
Shoe-mending	85.35
Leather	20.58
Plumbing	52.75
School appurtenances	43.93
Printing	59.30
Work on grounds	31.50
Ice	8.15
Fuel	1,168.69
Groceries	1,180.87
Milk	781.94
Bread	696.80
Shoes	56.25
Rent (foundling department)	60.00
Lumber	57.80
Repairs	339.70
Clothing	602.34
Meat	934.29
Medicine	108.90
Insurance	46.85
Carpentering	45.50
Furniture	296.29
Miscellaneous expenses	225.19
Total	10,000.00

Very respectfully,

ALICE M. SHADD,
Treasurer of National Association for Destitute Colored Women and Children of District of Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF THE PHYSICIAN.

WASHINGTON, D. C., *October* 21, 1889.

MADAM: Replying to your inquiry as to my views in relation to the Foundling Asylum or Home for Destitute Children, now located corner Four-and-a-half street and Maryland avenue, southwest, I would say I believe it to be one of the best institutions possible for any city to have.

The present location is one of the best in this city, near the center, but a short distance from police headquarters, and sanitary office easy of access, two street-car lines passing the building.

The building itself, with a few changes, is well adapted to the purpose, being isolated, with large rooms and ample grounds, well inclosed by high wall, giving the children plenty of air, and still being out of view of the public. The whole place is in a fair sanitary condition. Our death-rate has been low considering the class of children received at such an institution, as we all know these unfortunates are nearly all born of diseased parents, and marasmus or scrofula their only inheritance. There is no place so badly needed in this city as a home for destitute children, whether they be foundlings or not, a place open for the reception of children, through the police, sanitary officer, or any respectable physician, as a temporary or permanent home, just as the individual case requires. I often find women locked up at a station-house with babies or very small children, which should be sent to a place of this kind, but I am opposed to the word "colored," as it should be open to children without regard to color coming within a certain age.

I often find women sick who should be sent to a hospital, but if there are little children, there is no place to send them, so the mother has to stay at home. Of course this enlarges the field and requires money to carry it through, still it is badly needed in this city, and should receive a just support. I have been the attending physician since May last, making one daily visit, and am proud of our little home and hope it

may grow. I will cite you one case: You know our [illegible] to the foundling some months ago. I was called for after night by the police to go and see a case with them; we found the mother beastly drunk, three children were somewhere at large; and the baby was found in a room on the second floor alone, entirely naked and filthy. The police assisted me in looking for some clothing for the baby, but we could find none, and the only thing we could get was a piece of paper and some old rags, in which I wrapped the baby and took it to foundling, where Mrs. Forrest received it, and after giving it a good wash and something to eat I did not know it when I called in the morning. Just such cases are constantly coming under the notice of the police. I am sure the sanitary officer is very glad he has our Home to send to, as he has had considerable trouble in providing homes for his foundlings.

The police will be glad to get a place for the children of drunken mothers instead of keeping them in the cells.

Since I have been physician to the poor I have seen much of the criminal side of life, and I think the sooner these little ones are taken from their parents the better it will be for the city, for a child raised by such parents can be nothing but the worst element possible; still I am not in favor of offering a premium for immorality, knowing well the majority of these children are illegitimate, but they are here, and what is to be done but take care of them? It will certainly do away to a large extent the finding of dead babies in alleys and sewers.

Now, madam, I have given you a long rambling letter, but I did not know where to start, nor do I know when to stop. Again I say I am proud of our little ones. You would be surprised to hear them hallooing at me when I enter, and I verily believe the first word they learn to speak is doctor, and there is some one or more saying doctor all the time I am in the building. Now can you wonder when I say I have become attached to them, even if their skin is black?

Respectfully,

E. C. C. WINTER, M. D.,
815 *Four-and-a-half Street, Southwest.*

MRS. DOOLITTLE.

Mrs. Doolittle stated, "We ask for $10,000 for the Colored Orphans' Home, and $4,000 additional for the foundling department of that home. Two years ago Congress gave us $1,000 without our asking for it. We made the best possible use of it, and by running it in connection with another charity have got through so far. But we can not run the institution on $1,000, and there is great need for the amount asked for. The police bring children there, and the humane officer brings children there, not knowing where else to put them. We have to turn children away every day, and the mothers cry, because they want to go to work and the people won't take them, because they can not take their children, and the mothers have no place to leave them where they are safe."

Mrs. Doolittle went on to say that it costs more to take care of infants than it does to care for older children, as it requires more help. No distinction is made as to color. Good help and trained nurses are employed.

The following is an extract from the report of the Metropolitan police department for 1889 in connection with this subject:

"The destruction of infants is a subject which demands earnest consideration. Those responsible for this character of crime embrace every means to elude detection, and are almost invariably successful. There were seventy-one cases wherein the bodies of dead infants were found, as against ninety-eight for the past twelve months. Although a decrease, there is room for improvement in this direction. Experience teaches that the greater number of deaths of this kind are due to the want of a proper asylum for the disposition of children who are born to poor working women. While providing a place for their care might suggest further inducement for bringing illegitimate children into the world, it would be far more humane to take such means to spare infant life than through neglect to suffer its destruction, with that premeditation which constitutes murder. To facilitate the care of children, the sum of $1,000 was allowed the National Association for the Relief of Aged Colored Women and Children, and it is suggested that a further and enlarged appropriation to this institution, which has afforded commendable aid to this department, would tend to diminish this lamentable condition of affairs."

TWENTY-SIXTH ANNUAL REPORT OF THE NATIONAL ASSOCIATION FOR THE RELIEF OF DESTITUTE COLORED WOMEN AND CHILDREN FOR THE YEAR ENDING JANUARY 1, 1889.

OFFICERS FOR 1889.

President.—Mrs. M. S. Pomeroy, Kansas; residence in Washington, 1339 K street N. W.
Vice-President.—Miss L. S. Swan, No. 1 Thomas Circle.
Treasurer.—Mrs. A. M. Shadd, Freedmen's Hospital.
Secretary.—Mrs. H. A. Cook, 1005 Sixteenth street N. W.
Board of Managers.—Mrs. E. G. Dole, Mrs. C. A. S. Hall, Mrs. E. W. Lynch, Mrs. S. E. Baker, Mrs. L. S. Doolittle, Mrs. A. M. Purvis, Mrs. J. W. Scudder, Mrs. H. Douglass, Mrs. H. P. Ward.
Trustees.—Mr. John F. Cook, Hon. S. C. Pomeroy, Mr. W. H. A. Wormley.

ANNUAL REPORT YEAR ENDING JANUARY 1, 1889.

To the members of the National Association for the Relief of Destitute Colored Women and Children:

A summary of the yearly reports submitted by the matron and teachers of the Home for Destitute Colored Women and Children gives the following information:

Whole number cared for during the year	150
Number in the Home January 1, 1889—71 boys, 47 girls, 10 aged women	128
Whole number taught in the school	102
Number in the kindergarten (under six years)	28
Number in the industrial school (54 boys, 29 girls)	83

Average age of pupils is nine years.

Each one of the above items contains some fact of special interest to the association and merits a few words of comment or explanation.

The school as conducted by Miss Plummer gives perfect satisfaction, the order being excellent and the interest of the children in their studies being well sustained.

The new assistant, Miss Hunter, is characterized by the matron as thorough, earnest, and energetic. Although occupied until 3 o'clock by the duties of the schoolroom she conducts the exercises of the kindergarten from 3 to half-past 4 daily with spirit and success.

Mrs. Hall, chairman of the committee on education, says:

"I am more than satisfied with the progress of the scholars, especially when I consider the state of ignorance and destitution from which they come.

"Our teachers are earnest and efficient, the order is excellent, and the standard of scholarship compares favorably with that of the same grades in the other schools of this District."

The long list of articles made in the industrial school under the instruction of Miss Storum leads to the conclusion that but few idle hours are spent by the little inmates of the Home. To the list must be added 215 pairs of stockings, 20 pairs of mittens, 78 garters, and 1 hearth-rug completed by the knitting class under the personal supervision of the matron, Miss Heacock. When it is considered that the average age of the workers is but nine years, the showing is truly remarkable.

Special mention should be made of Cornelius Bruce, the lame boy. Not having been able to secure him a home in a family on account of his infirmity, the chairman of the committee on admission and dismission obtained permission for him to learn shoe-making in one of the workshops at Howard University. During the few months that have elapsed since he acquired his trade he has half-soled 165 pairs of the children's shoes.

It was stated in the last report that although 150 women and children might be accommodated at one time without danger from overcrowding, only 117 were in the Home, while at least 12 children were in the almshouse and others in charge of the Humane Society, whom the managers, for want of means to support them, were unable to receive. For this reason it was decided at the annual meeting that in addition to presenting the usual memorial to both Houses of Congress, a committee, consisting of the trustees and two of the lady managers, should be appointed to lay the claims of the institution before the Committee on Appropriations and endeavor to secure a sum sufficient for its needs. Those appointed appeared at the proper time before the Committee on Appropriations of the House of Representatives, with the result that $2,000 was added to the former appropriation, making the income from that source for the year ending June 30, 1889, $9,000; an amount which falls short by $1,000 of the sum asked for and believed by the management to be necessary to the proper maintenance of those committed to their charge.

may grow. I will cite you one case: You know our Cook baby I took to the foundling some months ago. I was called for after night by the police to go and see a case with them; we found the mother beastly drunk, three children were somewhere at large; and the baby was found in a room on the second floor alone, entirely naked and filthy. The police assisted me in looking for some clothing for the baby, but we could find none, and the only thing we could get was a piece of paper and some old rags, in which I wrapped the baby and took it to foundling, where Mrs. Forrest received it, and after giving it a good wash and something to eat I did not know it when I called in the morning. Just such cases are constantly coming under the notice of the police. I am sure the sanitary officer is very glad he has our Home to send to, as he has had considerable trouble in providing homes for his foundlings.

The police will be glad to get a place for the children of drunken mothers instead of keeping them in the cells.

Since I have been physician to the poor I have seen much of the criminal side of life, and I think the sooner these little ones are taken from their parents the better it will be for the city, for a child raised by such parents can be nothing but the worst element possible; still I am not in favor of offering a premium for immorality, knowing well the majority of these children are illegitimate, but they are here, and what is to be done but take care of them? It will certainly do away to a large extent the finding of dead babies in alleys and sewers.

Now, madam, I have given you a long rambling letter, but I did not know where to start, nor do I know when to stop. Again I say I am proud of our little ones. You would be surprised to hear them hallooing at me when I enter, and I verily believe the first word they learn to speak is doctor, and there is some one or more saying doctor all the time I am in the building. Now can you wonder when I say I have become attached to them, even if their skin is black?

Respectfully,

E. C. C. WINTER, M. D.,
815 *Four-and-a-half Street, Southwest.*

Mrs. DOOLITTLE.

Mrs. Doolittle stated, "We ask for $10,000 for the Colored Orphans' Home, and $4,000 additional for the foundling department of that home. Two years ago Congress gave us $1,000 without our asking for it. We made the best possible use of it, and by running it in connection with another charity have got through so far. But we can not run the institution on $1,000, and there is great need for the amount asked for. The police bring children there, and the humane officer brings children there, not knowing where else to put them. We have to turn children away every day, and the mothers cry, because they want to go to work and the people won't take them, because they can not take their children, and the mothers have no place to leave them where they are safe."

Mrs. Doolittle went on to say that it costs more to take care of infants than it does to care for older children, as it requires more help. No distinction is made as to color. Good help and trained nurses are employed.

The following is an extract from the report of the Metropolitan police department for 1889 in connection with this subject:

"The destruction of infants is a subject which demands earnest consideration. Those responsible for this character of crime embrace every means to elude detection, and are almost invariably successful. There were seventy-one cases wherein the bodies of dead infants were found, as against ninety-eight for the past twelve months. Although a decrease, there is room for improvement in this direction. Experience teaches that the greater number of deaths of this kind are due to the want of a proper asylum for the disposition of children who are born to poor working women. While providing a place for their care might suggest further inducement for bringing illegitimate children into the world, it would be far more humane to take such means to spare infant life than through neglect to suffer its destruction, with that premeditation which constitutes murder. To facilitate the care of children, the sum of $1,000 was allowed the National Association for the Relief of Aged Colored Women and Children, and it is suggested that a further and enlarged appropriation to this institution, which has afforded commendable aid to this department, would tend to diminish this lamentable condition of affairs."

TWENTY-SIXTH ANNUAL REPORT OF THE NATIONAL ASSOCIATION FOR THE RELIEF OF DESTITUTE COLORED WOMEN AND CHILDREN FOR THE YEAR ENDING JANUARY 1, 1889.

OFFICERS FOR 1889.

President.—Mrs. M. S. Pomeroy, Kansas; residence in Washington, 1339 K street N. W.

Vice-President.—Miss L. S. Swan, No. 1 Thomas Circle.

Treasurer.—Mrs. A. M. Shadd, Freedmen's Hospital.

Secretary.—Mrs. H. A. Cook, 1005 Sixteenth street N. W.

Board of Managers.—Mrs. E. G. Dole, Mrs. C. A. S. Hall, Mrs. E. W. Lynch, Mrs. S. E. Baker, Mrs. L. S. Doolittle, Mrs. A. M. Purvis, Mrs. J. W. Scudder, Mrs. H. Douglass, Mrs. H. P. Ward.

Trustees.—Mr. John F. Cook, Hon. S. C. Pomeroy, Mr. W. H. A. Wormley.

ANNUAL REPORT YEAR ENDING JANUARY 1, 1889.

To the members of the National Association for the Relief of Destitute Colored Women and Children:

A summary of the yearly reports submitted by the matron and teachers of the Home for Destitute Colored Women and Children gives the following information:

Whole number cared for during the year	150
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Average age of pupils is nine years.

Each one of the above items contains some fact of special interest to the association and merits a few words of comment or explanation.

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The new assistant, Miss Hunter, is characterized by the matron as thorough, earnest, and energetic. Although occupied until 3 o'clock by the duties of the school-room she conducts the exercises of the kindergarten from 3 to half-past 4 daily with spirit and success.

Mrs. Hall, chairman of the committee on education, says:

"I am more than satisfied with the progress of the scholars, especially when I consider the state of ignorance and destitution from which they come.

"Our teachers are earnest and efficient, the order is excellent, and the standard of scholarship compares favorably with that of the same grades in the other schools of this District."

The long list of articles made in the industrial school under the instruction of Miss Storum leads to the conclusion that but few idle hours are spent by the little inmates of the Home. To the list must be added 215 pairs of stockings, 20 pairs of mittens, 78 garters, and 1 hearth-rug completed by the knitting class under the personal supervision of the matron, Miss Heacock. When it is considered that the average age of the workers is but nine years, the showing is truly remarkable.

Special mention should be made of Cornelius Bruce, the lame boy. Not having been able to secure him a home in a family on account of his infirmity, the chairman of the committee on admission and dismission obtained permission for him to learn shoe-making in one of the workshops at Howard University. During the few months that have elapsed since he acquired his trade he has half-soled 165 pairs of the children's shoes.

It was stated in the last report that although 150 women and children might be accommodated at one time without danger from overcrowding, only 117 were in the Home, while at least 12 children were in the almshouse and others in charge of the Humane Society, whom the managers, for want of means to support them, were unable to receive. For this reason it was decided at the annual meeting that in addition to presenting the usual memorial to both Houses of Congress, a committee, consisting of the trustees and two of the lady managers, should be appointed to lay the claims of the institution before the Committee on Appropriations and endeavor to secure a sum sufficient for its needs. Those appointed appeared at the proper time before the Committee on Appropriations of the House of Representatives, with the result that $2,000 was added to the former appropriation, making the income from that source for the year ending June 30, 1889, $9,000; an amount which falls short by $1,000 of the sum asked for and believed by the management to be necessary to the proper maintenance of those committed to their charge.

The matter of drainage, or rather want of drainage, so often referred to, must be again brought to the attention of the association. The matron in one of her many reports on the subject says: The sewer, being intended for Mount Pleasant, is much too high to be of use to the Home, and the bed of the stream, which passes at the back of the grounds, once a fast-flowing body of water, has been so changed by the removal of cart-loads of sand as to have become a danger rather than a help, the deposits remaining on the surface and poisoning the air, unless a sudden fall of rain removes them for the time. Though the summer passed without serious illness in the family, such unhealthy surroundings are an ever-present cause of apprehension, and no effort should be spared on the part of the association to procure a remedy, if one can be devised. Appeals to the health office have been without avail, the physician in charge declaring himself powerless to effect a change.

It will be, doubtless, a matter of regret and disappointment to every member of the association to learn that the negotiations for the purchase of the lots contiguous to the home, at the corner of Eighth and Irving streets, are not yet concluded. When the trustees were requested by the executive committee to purchase the lots, Mr. Pomeroy undertook the task of raising the money on the Crandell note, a task which he performed with such vigor and success as to have the money in his hands, ready for use, the same month. It is now available whenever the delays of the law and the courts will permit the transaction to be completed.

At the October meeting the treasurer stated that $2,500 had been placed to her credit at the Treasury Department for the quarter ending September 30, and a like sum for the succeeding quarter, an amount which evidently included a proportion of the thousand dollars placed by Congress at the disposal of the association with the request that they would undertake the care of such infant foundlings as might be presented until other provision was made for them. The executive committee reluctantly accepted the charge and appointed a committee—Mrs. Doolittle, chairman—to make such arrangements for their reception as was possible. A nurse was engaged, a basement room (the only one available) was fitted with a stove, cribs, and other furniture, and six infants between the ages of one month and eighteen months were admitted. But though the management were unwilling to place the association in an attitude of opposition to the will of Congress they deeply regret the necessity which imposes this duty upon them. The place allotted is altogether unfit for babies, all the arrangements of the home having been adapted to the needs of older children. The managers feel that the supervision of this department, added to the care of one hundred and twenty-eight nearly helpless women and children, lays a burden of anxiety and responsibility upon the matron and her assistant greater than they should be required to bear.

In conclusion, it may be said that the donations and contributions for Thanksgiving and Christmas, more numerous and abundant than ever before, afford a gratifying proof of increasing interest in this branch of charitable work and of appreciation of the manner in which the work is carried on.

Respectfully submitted.

HELEN A. COOK,
Secretary.

TREASURER'S REPORT FROM JANUARY 1, 1888, TO JANUARY 1, 1889.

The National Association for the Relief of Destitute Colored Women and Children, Alice M. Shadd, treasurer, in account with the United States.

DR.		CR.	
To balance in U. S. Treasury Jan. 10, 1888	$3,500.00	By payment of bills and orders	$7,891.62
To appropriation of 1889	10,000.00	By balance in U. S. Treasury, Jan. 1, 1889	5,608.38
	13,500.00		13,500.00

Alice M. Shadd, treasurer, in account with the National Association for the Relief of Destitute Colored Women and Children.

DR.		CR.	
To balance in Treasury Jan. 9, 1888	$81.37	By payment of miscellaneous bills	$454.70
To membership fees	108.00	By balance in Treasury, Jan. 1, 1889	62.19
To payment for board	91.50		
To payment on Crandell note	176.88		
To donations	48.61		
To cash from sale of rags	10.53		
	516.89		516.89

Classification of expenditures.

Salaries and wages	$2,396.61	Insurance	$46.85
Matron's current expenses	240.00	Fuel	773.75
Milk	477.31	Leather	12.46
Medicine	74.70	Repairing furnaces, boilers, etc	209.55
Meat	808.14	Paints, oils, etc	3.66
Bread	705.50	Shoe mending	84.97
Gas	67.40	Plumbing	57.33
Groceries	985.53	Shoes	119.00
Lumber	70.69	House furnishings	23.10
Clothing	449.41	Yarn	11.01
Carpenter's work	77.00	Manure	30.00
Furniture	90.30	Miscellaneous	8.53
Printing	43.80		
Plastering and whitewashing	25.00		7,891.62

MATRON'S REPORT FOR 1888.

Number of inmates January 1, 1888:	
Women	10
Girls	47
Boys	60
	117
Received during the year:	
Women	1
Girls	11
Boys	21
	33
Sent to homes:	
Boys	8
Girls	7
	15
Ran away:	
Boys	2
Died:	
Woman	1
Girls	2
Boy	1
	4
Inmates, December 31, 1888:	
Women	10
Girls	47
Boys	71
	128

The children have knit 215 pairs stockings, 20 pairs mittens, 78 pairs garters, 1 hearth rug; half-soled 165 pairs shoes.

Very respectfully,

ELIZA HEACOCK,
Matron.

REPORT OF THE SCHOOL.

Whole number taught	102	Number of girls	40
Number withdrawn	14	Number in first grade	36
Average number enrolled	88.5	Number in second grade	13
Average daily attendance	88	Number in third grade	24
Average age	9	Number in fourth grade	29
Nbmber of boys	62		

NELLIE A. PLUMMER,
Teacher.

REPORT OF KINDERGARTEN.

Whole number entered	28	Number in first year's work	13
Number of boys	8	Number in second year's work	8
Number of girls	20	Number in third year's work	6
Number promoted to school September, 1887	7	Number on roll	27

L. ROMENA HUNTER,
Kindergartner.

REPORT OF INDUSTRIAL SCHOOL FROM JANUARY 1, 1888.

Number of pupils, 83: Girls, 29; boys, 54.

Sheets, 128; towels, 139; aprons, 99; knitting aprons, 23; handkerchiefs, 289; straps, 205; dusters, 23; bibs, 48; iron-holders, 10; waists, 26; chemises, 112; drawers, 63; pillow-slips, 122; night-gowns, 52; rollers, 6; collars, 14; ruffles, 35; napkins, 12; tablecloths, 2; dolls' drawers, 12; extra button-holes, 21; skirts, 11; pieced blocks for quilts, 52.

Fancy work.—Samplers, 13; outline tidies, 3; crochet tidies, 2; table mats, 5; outline splasher, 1; infant's sack, 1; hairpin cushions, 2; spectacle-wipers, 6; rick-rack, 4 yards; crochet lace, 2¾ yards; knit lace, 10⅝ yards.

Work done for foundling ward.—Sheets, 31; babies' napkins, 88; blankets, 16; pads, 11; towels, 18; curtain, 1; spreads, 12; bed-ticks, 6; bibs, 18.

SAREPTA STORUM,
Teacher.

F 10.

CHILDREN'S HOSPITAL.

WASHINGTON, D. C., *September* 14, 1889.

GENTLEMEN: In answer to your letter of August 1, 1889, requesting an estimate of the amount required for the conduct and support of the Children's Hospital for the fiscal year ending June 30, 1891, and a detailed statement of its receipts and expenditures, and its operations for the fiscal year ending June 30, 1889, I have the honor to transmit herewith the report of the treasurer and that of the resident physician, from which it will be seen that the receipts for the year ending June 30, 1889, amounted to $13,040.73, and the expenditures for the same period to $13,048.64.

The number of patients in the hospital as per last report was:		
White	24	
Colored	24	
		48
Admitted during the year:		
White	94	
Colored	105	
		199
Making in all		247
Discharged:		
White	80	
Colored	87	
		167
Died:		
White	None.	
Colored	13	
		13
Remaining June 30, 1889:		
White	31	
Colored	36	
		67

Number admitted to the dispensary:		
White	471	
Colored	1,696	
		2,167
Discharged:		
White	382	
Colored	1,596	
		1,978
Remaining:		
White	89	
Colored	100	
		189
Number of prescriptions compounded in the hospital and dispensary for the year ending June 30, 1889		8,277

The Children's Hospital was established in the year 1870, since which time it has been in successful operation, and, in addition to its maintenance, the land, buildings, furniture, and appliances—now valued at $200,000—all of which, with the exception of an appropriation by Congress more than ten years ago of $10,000, toward the building, and for some years past $5,000 annually towards its maintenance, have been paid for by private contributions.

Having reached a point when, for want of room, the present building ceased to be adequate to meet the demand for admissions, the board of directors have ordered additions to be made to the building, which when completed will double the present capacity of the hospital. These additions will be completed early in the coming year, and as the present income of the hospital from private contributions must go towards paying for the addition to the building, its furniture and equipment, I respectfully ask for an appropriation of $10,000 towards its maintenance for the next fiscal year.

Very respectfully,

M. W. GALT,
President of the Board of Directors Children's Hospital.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Report of patients treated in hospital for fiscal year ending June 30, 1889.

Remaining in hospital at last report, white, 24; colored, 24	48
Admitted to hospital during year, white, 94; colored, 105	199
Total treated in hospital during year	247
Discharged from hospital during year, white, 80; colored, 87	167
Died in hospital during year, colored, 13	13
Remaining June 30, 1889, white, 31; colored, 36	67

Monthly average attendance in hospital.

July	56.5	February	63
August	58.5	March	62.8
September	61	April	67.4
October	60	May	65
November	57	June	66
December	62.6		
January	62	Average daily	61.8

Admitted to dispensary, white, 471; colored, 1,696	2,167
Discharged, white, 382; colored, 1,596	1,978
Remaining, white, 89; colored, 100	189
Prescriptions compounded in hospital and dispensary for year ending June 30.	8,277

Account of the treasurer of the Children's Hospital for the year ending June 30, 1889.

Dr.			Cr.
To balance from last annual report	$395.28	By amount expended:	
To amount received from the District of Columbia	5,000.00	Marketing	$1,591.50
To amount received from board of lady visitors, individual contributions, and all other sources	7,645.45	Groceries	893.08
To amount overdrawn	7.91	Pay-roll	3,566.68
		Bread	643.83
		Milk	981.60
		Furniture	369.22
		Improvements and repairs	1,807.66
		Medicines, instruments, and appliances	835.44
		Printing	155.88
		Fuel and light	1,239.11
		Stationery	61.07
		Telephone	60.67
		Ice	252.92
		Removing ashes and snow	36.95
		Expenses of "Branch Dispensary"	470.73
		Miscellaneous	82.30
	13,048.64		13,048.64

The foregoing is a complete statement of my account for the time mentioned.

W. S. THOMPSON,
Treasurer Children's Hospital.

SEPTEMBER 5, 1889.

F 11.

ST. ANN'S INFANT ASYLUM.

ST. ANN'S INFANT ASYLUM,
Washington, D. C., August —, ——.

GENTLEMEN: In compliance with a request made from your office, dated 1st instant, I respectfully submit the detailed report of receipts and expenses of the asylum during the fiscal year ending June 30, 1889.

The average number of inmates daily, 110. We have this year received 131 children, and being obliged to keep the children until the age of six and seven years, which formerly was not done, it became absolutely necessary to put up an addition to the present building, which addition will cost about $16,000. We earnestly ask you, gentlemen, to help us by an appropriation from Congress to pay this heavy debt, which the health of the children obliges us to contract.

The annual expenses of our house is often more than we can meet, for with all our economy they are at an average from $11,000 to $12,000 without any extra expense.

This year we got three legacies, which enabled us to meet expenses; this is something we never had before.

Very respectfully,

SISTER ELIZABETH RILIHAN.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

RECEIPTS.

July, 1888:	
Subscriptions	$15.00
Children's relations	99.25
Donations	16.00
Sundries	25.50
Legacies	300.00
	455.75
August, 1888:	
Appropriation	1,097.80
Children's relations	90.25
Donations	35.00
Charity	16.00
Sundries	33.00
Legacies	500.00
	1,772.05
September, 1888:	
Appropriation	337.77
Children's relations	60.00
Donations	15.00
Charity	20.00
Sundries	58.00
Legacies	2,500.00
	2,990.77
October, 1888:	
Appropriation	334.57
Subscriptions	135.00
Children's relations	73.00
Donations	20.00
Charity	15.00
Sundries	25.00
	602.57
November, 1888:	
Appropriation	558.69
Children's relations	100.00
Donations	75.00
Charity	25.00
Sundries	50.00
	808.69
December, 1888:	
Appropriation	346.09
Children's relations	75.00
Charity	27.00
Sundries	20.00
	468.09
January, 1889:	
Appropriation	711.16
Subscription	52.00
Children's relations	93.00
Donations	100.00
Charity	18.00
Sundries	18.00
	992.16
February, 1889:	
Appropriation	333.20
Subscription	80.00
Children's relations	70.50
Donations	175.00
Charity	28.00
Sundries	15.25
	701.95

March, 1889:	
Appropriation	$88.05
Subscription	26.00
Children's relations	93.00
Donations	20.00
Charity	20.00
Sundries	25.50
	272.55
April, 1889:	
Appropriation	523.89
Children's expenses	53.00
Charity	15.00
Sundries	6.00
	597.89
May, 1889:	
Appropriation	641.64
Children's relations	90.00
Donations	15.00
Charity	10.00
Sundries	8.00
	767.64
June, 1889:	
Appropriation	1,027.14
Children's relations	70.00
Charity	16.00
	1,113.14

EXPENSES.

July, 1888:	
Wet-nursing infants, three at $14, one at $12, one at $9, and twenty-four at $8 per month	255.00
Groceries	24.24
Butter, milk, and eggs	148.76
Meat, at 10, 12½, and 15 cents per pound	108.62
Bread	112.41
Repairs	80.00
Two men at $10 each, two cooks at $9 each, and 7 nurses at $6 each, per month	80.00
Children's expenses	56.00
Sundries	129.11
	994.14
August, 1888:	
Wet-nursing infants, four at $14, one at $9, and twenty-three at $8 per month	249.00
Vegetables	47.20
Meat, at 10, 12½, and 15 cents per pound	192.75
Two men at $10 each, two cooks at $9 each, and 7 nurses at $6 each	80.00
Children's expenses	194.45
Fuel and gas	593.80
Sundries	189.82
	1,547.02
September, 1888:	
Wet-nursing infants, three at $14, one at $10, one at $12, and twenty-two at $8 per month	240.00
Vegetables	48.77
Butter, milk, and eggs	52.99
Meat, at 10, 12½, and 15 cents per pound	131.98
Repairs	55.70
Two men at $10 each, two cooks at $9 each, and 7 nurses at $6 each	80.00
Children's expenses	88.62
Sundries	109.68
	807.74

October, 1888:

Wet-nursing infants, three at $14, one at $16, and twenty-one at $8 per month	$226.00
Vegetables	33.99
Meat, at 10, 12½, and 15 cents per pound	143.45
Bread, per gross	108.57
Two men at $10 each, two cooks at $9 each, and seven nurses at $6 per month	80.00
Children's expenses	38.47
Sundries	82.98
	713.46

November, 1888:

Wet-nursing infants, four at $14, one at $16, one at $10, and eighteen at $8 per month	226.00
Groceries	316.27
Vegetables	29.17
Butter, milk, and eggs	41.35
Meat, at 10, 12½, and 15 cents per pound	141.75
Repairs	174.00
Two men at $10 each, two cooks at $9 each, and seven nurses at $6 each, per month	80.00
Children's expenses	10.93
Gas	9.00
Sundries	115.27
	1,143.74

December, 1888:

Wet-nursing infants, three at $14, one at $16, one at $9, and seventeen at $8 per month	203.00
Vegetables	32.05
Butter, milk, and eggs	37.14
Meat, at 10, 12½, and 15 cents per pound	131.76
Repairs	121.00
Two men at $10 each, two cooks at $9 each, and seven nurses at $6 each	80.00
Children's expenses	42.75
Gas	5.00
Sundries	129.45
	782.15

January, 1889:

Wet-nursing infants, three at $14, one at $16, one at $15, and seventeen at $8 per month	209.00
Groceries	81.31
Vegetables	21.25
Meat, at 10, 12½, and 15 cents per pound	120.08
Repairs	180.90
Two men at $10 each, two cooks, at $9 each, and five nurses at $7 each	75.00
Children's expenses	22.99
Gas	6.00
Sundries	195.68
Bread	116.41
	1,028.62

February, 1889:

Wet-nursing infants, three at $14, one at $10, and twenty at $8 per month	212.00
Vegetables	16.97
Meat, at 10, 12½, and 15 cents per pound	130.90
Two men at $11 each, two cooks at $9 each, and five nurses at $7 each per month	75.00
Gas	7.00
Sundries	229.25
	671.12

March, 1889:	
Wet-nursing infants, three at $14 and twenty-one at $8 per month	$210.00
Vegetables	25.38
Meat, at 10, 12½, and 15 cents per pound	95.70
Bread	78.00
Two men at $11 each, two cooks at $9 each, and seven nurses at $6 each, per month	80.00
Fuel and gas	105.75
Sundries	164.72
	759.55
April, 1889:	
Wet-nursing infants, two at $15, three at $14, and sixteen at $8 per month	200.00
Vegetables	31.22
Butter, milk, and eggs	11.12
Meat, at 10, 12½, and 15 cents per pound	20.62
Bread	113.89
Two men at $10 each, two cooks at $9 each, and seven nurses at $6 each, per month	80.00
Gas	4.00
Sundries	94.41
	555.26
May, 1889:	
Wet-nursing infants, one at $15, three at $14, and fifteen at $8 per month	185.00
Groceries	99.78
Vegetables	83.50
Butter, milk, and eggs	170.26
Meat, at 10, 12½, and 15 cents per pound	123.69
Two men at $10 each, two cooks at $9 each, and seven nurses at $6 each, per month	80.00
Children's expenses	8.10
Sundries	126.29
Gas	3.00
	879.62
June, 1889:	
Wet-nursing infants, four at $14 and seventeen at $8 per month	192.00
Groceries	275.36
Vegetables	33.38
Butter, milk, and eggs	138.20
Meat, at 10, 12½, and 15 cents per pound	187.35
Bread	112.28
Two men at $10 each, two cooks at $9 each, and seven nurses at $6 each, per month	80.00
Gas	2.00
Sundries	45.95
	1,046.52

RECAPITULATION.

	Receipts.		*Expenses.*
1888: July	$455.75	1888: July	$994.14
August	1,772.05	August	1,547.62
September	2,990.77	September	807.74
October	602.57	October	713.46
November	808.59	November	1,143.74
December	468.09	December	782.15
1889: January	992.16	1889: January	1,028.62
February	701.95	February	671.12
March	272.55	March	759.55
April	597.89	April	555.26
May	767.64	May	879.62
June	1,113.14	June	1,046.52
Total	11,543.25	Total	10,928.94

To clothing ten sisters, at $50 each per annum	$500.00
Medicine per annum	65.00
Total expenses	11,493.94
Total receipts	11,543.25
Balance	49.31

ST. ANN'S INFANT ASYLUM,
Washington, October 7, 1889.

GENTLEMEN: Having this year been obliged to put up an addition to the asylum, and having seen $16,000 recommended for our house, we were led to think that this amount would only be asked for. We have asked for the $16,000 for building only, and earnestly beg you to recommend our usual appropriation for the support of the asylum.

Hoping that you will do all you can for our little ones in this matter,
I remain, very respectfully,

SISTER E. RILIHAN.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 12.

ST. ROSE'S INDUSTRIAL SCHOOL.

GENTLEMEN: The St. Rose Industrial School is situated on G street between Twentieth and Twenty-first streets. The object of the institution is the training of orphan girls of advanced years to useful trades, such as dressmaking, millinery, and French cooking. After going through the different departments they are placed in good situations, where they can make an honest living for themselves. The number of inmates at present is 69. The number sent out during the past year is 38, and 39 received. The money given by Congress is not for the support of the institution, as all the inmates work together to maintain themselves. The appropriation of $5,000, which was for the enlargement of the building, was paid to the builder of the institution, which is still in debt, the upper stories being still unfinished. Another appropriation of $5,000 will be gratefully received.

Respectfully,

SISTER CLARA,
Treasurer of St. Rose's Industrial School.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 13.

GERMAN ORPHAN ASYLUM.

WASHINGTON, D. C., *September* 11, 1889.

GENTLEMEN: We have the honor to report that during the nine years of the existence of the German Orphan Asylum 139 orphan children have found a home in the same.

During the past year (1888 to 1889) 42 orphans (29 girls and 13 boys), of which the youngest was two, the oldest eighteen years of age, were taken care of in the asylum. The eighteen-year-old is a girl orphan, who now aids in caring for the others.

Of this number one attended the High School in Washington, 23 attended the public school in Anacostia, the remainder received preparatory instructions in the institute.

The larger children attend the Sunday school of the Rev. Dr. W. C. Davenport, in Anacostia.

The employés of the institute consist of one manager, one matron, one cook, and one farm hand; temporarily are employed a sewing-woman, one washer-woman, and, at the time of harvest, a few hands as helps on the farm.

The German Orphan Asylum having had no established funds was from the beginning, as at present, dependent on the liberality of the citizens, by whose gifts it is maintained, and by which alone its object, to furnish to dependent orphan children a home and educate them to be useful citizens, can be obtained.

The management of the asylum is very economical. According to the report of the finance secretary, G. Hartig, the total cash expenses for the twelve months of the year 1888–1889 amounts to only $1,999.59, or $166.66 per month, an amount for the government of a family of forty-five to fifty persons so small that perhaps no similar establishment in the country can boast of a similar economical management. Of course this is somewhat due to the fact of having an income from the farm.

By donations of patrons of the asylum a fund of $9,000 has accumulated, which is invested, and of which only the annual interest is available to the institute.

In consequence of the healthy location of the asylum, and the constant exercise in the fresh air which the children enjoy on the large grounds (32 acres) of the institute, no disease of any kind prevailed during the past year among the inmates of the asylum.

The building in which the asylum is located, a frame structure, is badly adapted for a public institution, but necessity compelled the board of directors to use it up to date.

At the last session of Congress an appropriation of $10,000 in aid of a brick building was obtained, conditioned that we raise an equal amount. This we have done, and the erection of a proper building will commence at once, but this amount is entirely inadequate, and we earnestly and respectfully ask you to recommend an appropriation of $20,000 so as to secure the erection of a proper building, fire-proof and comfortable.

Our asylum is non-sectarian; is open to all confessions, and to all orphans who may be domiciled in Washington City.

Our grounds give ample room for all future buildings, and are in every respect calculated for the improvement of the young and helpless.

We shall be pleased to have you personally inspect the place, and are ready to meet you there.

Yours, very truly,

S. WOLF,
Chairman of Committee
J. E. WEYSS,
Secretary.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 14.

CHURCH ORPHANAGE ASSOCIATION.

WASHINGTON, D. C., *August* 13, 1889.

SIRS: In compliance with your instructions I hand you herewith detailed statement of receipts and expenditures of the Church Orphanage Association of St. John's Parish for the year ending June 30, 1889. I take this opportunity to ask your especial attention to this charity.

We are doing incalculable good in this city; we are taking homeless children from the streets, supporting and teaching them, and procuring for them good homes when they reach a suitable age. Our numbers are increasing each year and our expenses are necessarily enlarged. In view of this fact and of the actual benefit accruing to the District through the work of this organization, I earnestly ask that our annual allowance be increased to $2,500.

Every dollar that we receive is carefully and economically expended.

Very respectfully,

THO. HYDE,
Treasurer Church Orphanage Association.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Statement of receipts and disbursements Church Orphanage Association of St. John's Parish, Washington, D. C., for year ending June 30, 1889.

RECEIPTS.

Donated by Congress for maintenance	$1,500.00
Donated by Congress for building	4,000.00
Withdrawn from my account with Treasurer United States	3,000.00
Withdrawn from my account with Treasurer United States (see debit entry same amount)	19.82
Voluntary contributions	2,518.19
	11,038.01

EXPENSES.

Balance due treasurer as per last account	$709.61
Paid for milk	462.46
Groceries and produce	1,117.94
Meat and eggs	83.39
Dry goods	30.74
Gas	62.89
Drugs	5.75
Repairs, including considerable work on country home in Virginia	690.94
Shoes	101.05
Iron bedsteads	69.75
Insurance	71.75
Coal	169.75
Garden seeds for country home	22.70
Stationery and printing	30.25
Payments to sister in charge for sundry household expenses	825.00
Deposited with Treasurer United States on account of overdraft	19.82
Repaid Riggs & Co. money borrowed	2,097.67
For addition to orphanage	4,000.00
Balance on hand June 30, 1889	466.55
	11,038.01

THO. HYDE,
Treasurer.

WASHINGTON, D. C., *September* 9, 1889.

GENTLEMEN: As a member of the board of trustees of the church orphanage of St. John's Parish, F and Twentieth streets, northwest, I wish to invite your interest to Mr. Treasurer Hyde's report, lately presented to you, and to urge the necessity of the increase of appropriation there asked for.

When Congress, on the recommendation of the Commissioners some years since, granted the sum of $1,500, there were some thirty-five or forty children sheltered and educated at the house; since that time two more buildings have been added to it, and the family now numbers eighty-three children.

I have to urge that the yearly allowance asked for may be $2,500, which was the amount of the first appropriation ever made by Congress for this charity.

When it is considered that over eighty children from the lowest class of the people are here rescued from want and led into worthy life, your interest in this institution must be assured.

Respectfully, yours,

F. M. GUNNELL.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 15.

WASHINGTON HOSPITAL FOR FOUNDLINGS.

GENTLEMEN: The board of directors have the honor to transmit to you the following annual report of the Washington Hospital for Foundlings for the fiscal year ending June 30, 1889.

The Washington Hospital for Foundlings, situated on Fifteenth street, between R and S streets, No. 1715 Fifteenth street, was open for the reception of children January 4, 1887.

The value of the buildings and grounds as at present estimated is as follows:

38,220 feet of ground on Fifteenth street, west, between R and S streets, north, at the estimated value of $1.25 per foot	$47,775
Improvements on ground	25,000
Total	72,775

HEALTH AND CAPACITY OF ASYLUM.

The hygienic conditions of the asylum have been materially improved. As a result, the health of the inmates has been excellent. No epidemic nor contagious disease, except chicken-pox, have existed in the hospital during the past year. The percentage of deaths has been unequalled in the history of similar institutions, not a death having occurred for some time past. We are now able to comfortably accommodate 50 children (babes), but all the attendants necessary for the care of the same can not be accommodated in the building.

There were in the hospital July 1, 1888, 20 children. Thirty-one were admitted during the year, making a total of 51. Of these 12 were adopted.

Applications for the adoption of children have rapidly increased. They reach the hospital from distant points. When received, the

standing of the applicants, socially, morally, and financially, is carefully investigated, and the applications are favorably considered only when the inquiries are satisfactorily answered. The children are placed for adoption when the directors are convinced that their condition in life will be materially improved, and thereafter the management keep well informed of the progress of such children, and both retain and exercise the right to resume control over them when not well cared for. In the past year 12 children have been placed in comfortable homes, situated in New York, New Jersey, Wisconsin, Missouri, the District of Columbia, Maryland, and other States.

NUMBER OF EMPLOYÉS.

Matron, head nurse, 5 nurses, 2 laundresses, janitor, house-maid, cook, nursery-maid; total, 13.

AMOUNT PAID TO EMPLOYÉS PER MONTH.

Matron	$40	Janitor	$20
Head nurse	30	House-maid	12
Nurses (average)	12	Cook	10
Laundresses	10	Nursery-maid	6

RECEIPTS.

United States appropriation	$7,600.00
Membership dues and contributions	482.82
Proceeds of entertainments	561.22
Endowment fund	241.20
Estate of David L. Morrison, legacy	1,000.00
John B. Larner, donation	400.00
Cash received from sale of cows and calf	81.00
Matron's receipts	42.18
Total	10,408.42

Congress also appropriated $5,000 for the construction of a new wing, but the amount was found to be so wholly insufficient that the appropriation has not been of any avail.

A large number of the most prominent ladies and gentlemen in the city give very considerable attention to the comfort and advancement of the children, and they also donate articles of wearing apparel and assist in getting up entertainments, etc.

The moral support thus given by influential citizens is enabling the asylum to rapidly attain a firm footing. It, however, still remains true that for its regular maintenance it will have to depend for a while longer upon Congressional appropriations. This is unavoidable, from the difficulty of securing aid from individuals in the form of money during the probationary period of any charitable institution.

EXPENDITURES.

Salaries and wages	$2,037.61
Nursery food and milk	226.56
Ice	38.76
Provisions	737.64
Druggist supplies	120.36
Sundries, house and laundry	57.57
Fuel (part of this amount covers fuel for 1889-'90)	581.41
Gas	84.89
Dry goods, clothing, rubber goods, table linen, bed linen, etc	83.06
Printing, advertising, stationery, postage	162.31
Cows	75.00
Miscellaneous	109.52

House furnishings, furniture, china, glass, tinware, hardware, etc.	$371.36
Insurance	40.00
Heating apparatus	599.77
Repairing kitchen, pantry, and dining-room, including range	333.60
Basement rooms repairs	153.93
Laundry repairs and improvements	93.50
Store-room	64.28
Repairs in infants' kitchen and milk-room	271.25
Repairs to matron's room, housekeeper's room, and head nurse's room	27.50
Repairs to nursery, upper and lower wards, bath-rooms, and making sanitary improvements	427.60
Preparing room for the reception of dead bodies, including sanitary arrangements	333.50
Repairs to rooms for reception of infants awaiting medical inspection, and isolating room for contagious diseases	208.18
Rear stairway	178.04
Repairs, sheathing and water-table for preventing leaks, etc., in six corridors	344.43
Making screens, screen doors, etc	79.27
Repairs, doors, sashes, blinds, and house	117.77
Repairs, hydrants and cess-pool and drains	148.90
Repairs, roof	56.38
Repairs to yard and fence, and walks for baby carriages, etc	24.75
Total	8,189.70

REPAIRS.

The hospital is now in good condition, many important repairs having been made during the past year. This became necessary from the fact that when the buildings were originally constructed the institution had not the funds for many modern improvements, and they were therefore necessarily omitted or only partially completed.

IMPROVED METHODS PROPOSED.

It is proposed during the ensuing year to put in operation in the asylum a school-room for the children of sufficient age to require instruction. This will obviate the necessity of sending children outside of the institution to be educated.

It is also proposed to start a training-school for nursery maids. This will not only best supply the needs of the asylum, but it will also supply a long-felt want in this city. Citizens desiring that character of service in their homes can thereby draw from a reliable corps of nursery maids thoroughly trained under the supervision of skillful physicians.

Appropriation wanted for 1890-'91.

Maintenance	$9,000
Grading, sodding, and improving yard and lot	1,000
Total	10,000

Very respectfully,

Z. T. SOWERS, M. D., *President*,
Mrs. E. C. HUTCHINSON, *Vice-President*,
WILLIAM F. MATTINGLY, *Treasurer*,
Mrs. J. CURTISS SMITHE, *Secretary*,
M. M. PARKER,
Miss H. WILLIAMSON,
J. P. KLINGLE,
Mrs. E. R. WALLACE,
A. T. BRITTON,

Board of Directors of the Washington Hospital for Foundlings.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

WASHINGTON HOSPITAL FOR FOUNDLINGS.

This institution, for which Congress last year appropriated $7,600, is doing good work and is capable with assistance of doing much more. The asylum will accommodate 50 children; 31 were admitted during the year, 12 of whom were adopted. The applications for adoption are carefully examined before admission.

The receipts for the year were $10,408.42, which included the appropriation above referred to and a legacy of $1,000 received from the estate of David L. Morrison. Expenditures were $8,189.70. Besides the above appropriation, Congress appropriated $5,000 for the construction of a new wing. This was not availed of, because it was insufficient.

They report that while many ladies and gentlemen give considerable attention to the needs of the asylum, they will be compelled to depend for a while longer on Congressional aid on account of the difficulty of securing sufficient pecuniary aid elsewhere. They propose to put in operation in the asylum a school-room, which will obviate the necessity of sending children away from the home to receive school instruction.

A training-school for nurses is also proposed, so that citizens desiring such services can have a reliable corps to draw from. They ask an appropriation of $9,000 for general maintenance and $1,000 for improvements, which are recommended.

Very respectfully,

W. S. MATTHEWS.

F 16.

ASSOCIATION FOR WORKS OF MERCY.

GENTLEMEN: The Association for Works of Mercy herewith submits a statement of its receipts, expenditures, and operations for the year ending June 30, 1889.

RECEIPTS.

Balance on hand July 1, 1888, with treasurer	$296.23
Balance with lady in charge	13.07
Received from contributions	1,006.61
Received from United States Treasury	5,000.00
Total	6,315.91

EXPENDITURES.

Final payment for house and lot	1,994.77
Expenses in respect of new wall	1,493.00
For supplies and miscellaneous expenses as per detail in accounts of treasurer and lady in charge herewith	2,410.07
Balance turned into treasury	12.23
Balance on hand	405.54
Total	6,315.91

Ludwick C. Young, treasurer, in account with Association for Works of Mercy, District of Columbia.

CONTRIBUTION FUNDS.

1888.			1888.		
July 1	To balance on hand	$296.23	July 18	By cash to Mrs. E., for watchman	$1.50
18	To cash received from Mrs. Edmunds	7.75	31	By cash to Miss Talcott, lady in charge, for expenses	130.00
Sept. 22	....do	10.00	Sept. 1	....do	130.00
22	....do	3.00	Oct. 1	....do	10.00
Nov. 6	....do	20.00	Nov. 28	....do	107.00
12	To cash received from Miss Talcott	107.00	1889.		
Dec. 5	To cash received from Mrs. Edmunds	18.00	Feb. 21	By bill for furnace	201.50
11	....do	73.50	Mar. 26	By bill for printing postals	3.00
1889.			Apr. 6	By premium of insurance $5,000, five years	84.00
Jan. 15	....do	155.35	May 14	By Miss Talcott, order of managers	100.00
Feb. 1	....do	82.00	June 5	By Miss Talcott for expenses	130.00
12	....do	84.75	30	By balance	405.84
Mar. 12	....do	88.25			
Apr. 10	....do	168.41			
May 2	....do	31.00			
6	To cash received from Senator Edmunds	5.00			
14	To cash received from Miss Strong, acting purser	81.35			
June 17	....do	71.25			
		1,302.84			1,302.84
June 30	To balance	405.84			

Ludwick C. Young, treasurer Association for Works of Mercy, District of Columbia, in account with United States treasurer, July 1, 1888, to July 1, 1889.

1888.			1888.		
Sept. 12	To amount of appropriation	$5,000.00	Sept. 15	By check No. 308,803, on construction of wall	$500.00
			15	No. 308,804, note and interest	1,994.77
			15	No. 308,805, maintenance	130.00
			Oct. 4	No. 308,806, on construction of wall	845.00
			Nov. 3	No. 308,807, maintenance	130.00
			3	No. 308,808 on construction of wall	133.00
			9	No. 308,809, maintenance account furniture	300.00
			Dec. 5	No. 308,810, maintenance	130.00
			1889.		
			Jan. 2	No. 308,811, maintenance	130.00
			16	No. 308,812, maintenance	100.00
			Feb. 1	No. 308,813, maintenance	135.00
			Mar. 1	No. 308,814, maintenance	150.00
			13	No. 308,815, maintenance	
			13	No. 308,816, maintenance bill groceries	130.00
			13	No. 308,817, maintenance bill groceries	10.76
			13	No. 308,818, maintenance bill plumbing	12.08
			13	No. 308,819, maintenance bill for milk	7.60
			14	No. 308,820, maintenance bill for fuel	5.12
			20	No. 308,821, maintenance bill printing	54.75
			May 6	No. 308,822, maintenance	27.50
			June 29	No. 308,823, bill for extension of sewer, on wall account	47.19
			29	No. 308,824, bill connecting gutter, on wall account	12.00
			29	Cash balance	3.00
					12.23
		5,000.00			5,000.00
1889.					
June 29	To balance	12.23	July 15	By deposit in United States Treasury	12.23

Financial statement of lady in charge.

RECEIPTS.

Balance on hand July 1, 1888	$13.07
Received from treasurer of House of Mercy during fiscal year, as per treasurer's account	1,889.19
	1,902.26

EXPENDITURES.

Expense of taking inmates to country and return during building of wall	67.54
Provisions	898.16
Repairs and miscellaneous household expenses	142.23
Clothing and shoes	124.96
Gas	45.16
Fuel	132.18
Salaries and wages	340.76
Postage, street-car and cab fare	48.35
Medicines	17.62
Books	10.00
Plumbing	24.85
Carpenter's bill	33.65
Expenses in garden	16.80
	1,902.26

OPERATIONS.

Number of inmates July 1, 1888	9
Received since	14
	23
Sent to hospital	1
Left	2
Returned home	1
Number of inmates June 29, 1889	19
	23

The resident lady in charge has served without other compensation than her board. There have been three assistants and a part of the time four. This summer there has been a cook.

The statements made in the last report are, we think, confirmed as to the moral and social benefits to the inmates and to the community flowing from the efforts and work of the institution, notwithstanding the embarrassments arising from the want of facilities for keeping those belonging to the class in respect of which guardianship and protection is proper separate from those in respect of whom reformation must be the leading object. The beneficence of Congress, at its last session, inaugurated steps looking to providing for the latter necessity. In an inclosed angle of the property heretofore purchased, and now paid for, was a lot on the corner of K and Twenty-fourth streets, in aid of the purchase of which Congress provided means, after full explanation of the situation and circumstances of the institution to the Committee on Appropriations of the Senate. Accordingly the ground was purchased at the price of $8,362.50, and the sum appropriated toward its payment —$3,000—was paid and the title taken. The balance of the purchase money—$5,362.50—and some interest remains to be provided for. Payment upon it is due as follows: October 1, 1889, $5,451.26, with interest from July 15, 1889.

Whether this balance shall be paid at once, thus saving interest, or whether money shall be borrowed on further time, is, of course, for Congress to determine.

When this added land can be devoted by suitable building to the entire separation of the two classes before mentioned, it is believed that all the money and care and labor devoted to these ends will have been well spent, not only in respect of the mere good order of the Capital, but in respect of the reformation and preservation to good and useful lives of many of the most unfortunate and wretched of all classes of our people.

It need hardly be observed that the work in which the members of this association are engaged is as difficult and trying as any work of benevolence and duty in which any one can be engaged.

In view of the whole subject, we have the honor to ask, respectfully and earnestly, that an appropriation be made toward the repairs and maintenance of the institution of $2,500; for payment of balance due on the newly-purchased land, or so much thereof as may be necessary, $6,000; for the erection of an additional building, in order to the separation of the different classes of inmates, $15,000.

All of which is respectfully submitted,

SELMA MOORE HARVEY, *President.*
SUSAN M. EDMUNDS, *Purser.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 17.

NATIONAL HOMEOPATHIC HOSPITAL ASSOCIATION.

GENTLEMEN: The trustees of the National Homeopathic Hospital Association have the honor to report to you as required by law "a full and detailed account of receipts and expenditures and all their operations" for the year ending June 30, 1889.

The hospital has been very prosperous during the year. It was open for the reception and treatment of patients all of the time, with the exception of the month of June, 1889. It was then closed for improvements and repairs which were absolutely essential and which could not be made while it was occupied by patients. The experience of the past had convinced the trustees that their present building was not large enough or properly arranged for the needs of a general hospital which should accommodate, with proper treatment and care, patients of all ages and sexes, white and colored. They therefore employed Mr. James G. Hill as architect to draw plans for remodeling the present building and for such additions as are absolutely necessary for the needs of the hospital.

Mr. Hill, after much study of the present building and of the most approved hospital designs, prepared the necessary plans, and has freely advised the trustees in regard to their improvements. He has very generously donated his services. Mr. Entwisle, the inspector of buildings, has also given our building committee valuable assistance. It was found upon examination that the foundations of the hospital building were not as substantial or secure as had been supposed, and a considerable part of the money in hand for construction was necessarily expended upon them. While so doing the north and west basements were prepared for practical uses. The rooms fronting west have been made into plain but convenient offices and waiting rooms for the free dispensary. They are dry, light, and pleasant. The remaining basement rooms are adapted to storage and other necessary uses. The first floor of the building has been remodeled so as to provide an additional

ward for patients. It is light and cheerful. The necessary office and reception rooms have been located near the entrance, and everything so arranged that those having business at the hospital can be more easily seen and the patients better cared for. On the second floor other changes have been made and a small ward for children prepared. Wherever necessary the walls have been replastered and finished with soapstone. The plumbing and heating arrangements have been materially improved and new work done. Nearly all the wood-work of the hospital building has been either painted or grained and varnished.

These repairs and improvements have been made with care and with a constant endeavor to secure the best possible results for the money expended. When the hospital was vacant it was decided to complete all needed changes in the part of the building covered by the work done, so that in the future the work of the hospital may not be again intermitted. To do this necessitated the expenditure of more moneys than were available, and the trustees find themselves at this date in debt on their construction account nearly $4,000. They invite the most careful scrutiny of their disbursements, and point with pride to what they have accomplished. Besides the general improvements, they have already provided sufficient accommodations for the free dispensary, a children's ward and better accommodations for colored patients than heretofore.

They confidently believe that Congress and a generous public will suppy the funds necessary to complete the building according to the plans adopted and to carry on the hospital in an economical manner.

The treasurer's report for the fiscal year ending June 30, 1889, is hereto appended, and reference to it is requested. It does not show all the expenditures on the construction account, as the money in hand was sufficient to meet the expenses incurred prior to the end of the fiscal year. The indebtedness mentioned above has been contracted since the beginning of the present fiscal year, and hence does not appear in that report.

During the eleven months of the fiscal year ended June 30, 1889, there were 1,903 patients treated in the hospital. Of these 746 were males and 1,157 females; 1,836 were natives and 67 foreign-born.

By classification of general diseases, the patients were treated as follows:

For diseases of the—	
Nervous system	243
Respiratory organs	407
Circulatory system	234
Digestive organs	418
Urinary organs	79
Glandular system	56
Reproductive organs	215
Cutaneous system	155
Blood	27
For injuries	39
Operations performed	30
Total	1,903

Of those regularly admitted to beds in the hospital there were 168; 129 recovered; 32 were improved; 3 died of phthisis pulmonalis, 1 of mitral stenosis, 1 of degeneration of the heart, 1 of pneumonia, and 1 of chronic cystitis.

The paid employés of the hospital have usually been a house physician and surgeon, a matron, one male, and three female nurses, a janitor, a night-watchman, a cook, two house-girls, two laundresses, a waitress, and a hall and office boy. The trustees expect to increase

the number of nurses at an early date. Those now employed are overworked and the new wards opened by the changes made in the building require added nurses.

The trustees, the medical staff, the house committee, and other officers of the association serve without compensation.

The improvements at the hospital will enable the trustees to care for a greater number and variety of patients than ever before. They therefore estimate and ask for an appropriation from Congress of $10,000 for the maintenance during the next fiscal year of free patients, white and colored. That sum will not enable the trustees to meet all the calls for care and treatment which they, in view of the past, now anticipate. They propose to admit to the hospital as free patients only those to whom its service is a necessity.

The trustees, in view of the fact that no appropriation was made on that account last year, now ask and estimate for $20,000 for general construction and repairs for the next fiscal year, and $3,500 for an elevator. With this amount they can complete the buildings according to the plans prepared by the architect. Those plans include a new kitchen and engine room and an elevator, which are very much needed for the hospital as now constructed; a new ward for midwifery cases, and sufficient accommodation for colored patients of both sexes. The required work can be more economically done at once than at several times, therefore one lump appropriation for the full amount will be more valuable than a like aggregate sum appropriated at different times. With the amount of the estimate sufficient accommodations can be secured so that the trustees will not ask for further appropriations for purposes of construction for years to come, and never unless the demands upon them become imperative.

In conclusion, the trustees ask the Commissioners to visit the hospital and observe for themselves its practical and beneficent operations and the careful and wise expenditure of the moneys appropriated by Congress, both for maintenance and construction. If the Commissioners will designate the time they can make such visit it will be the especial pleasure of the trustees to be present to welcome them and to specifically point out and explain the improvements made with the funds granted to them for that purpose.

Respectfully submitted.

HENRY M. BAKER,
Acting President of the Trustees of the National Homeopathic Hospital.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Treasurer's report of the receipts and expenditures of the National Homeopathic Hospital Association of Washington, D. C., for the year ending June 30, 1889.

RECEIPTS.

Balance on hand July 1, 1888		$62.33
From patents		2,841.42
From membership		98.00
From donations		28.00
From old materials, etc		9.51
From Ladies' Aid		800.00
From Congress for construction	$3,500	
From Congress for maintenance	3,000	
		6,500.00
From loan Columbia National Bank	1,200	
From loan National Metropolitan Bank	1,250	
		2,450.00
		12,789.26

DISBURSEMENTS.

For maintenance	7,741.91	
For sundries	590.88	
For furniture, bedding, etc	204.21	
For construction, repairs, etc	3,525.61	
For curtail of note Columbia National Bank	450.00	
		12,512.61
		276.65

JNO. JOY EDSON,
Treasurer.

F 18.

HOUSE OF THE GOOD SHEPHERD.

WASHINGTON, D. C., *September* 14, 1889.

GENTLEMEN: In pursuance of the request from your office, dated the 1st ultimo, we herewith submit a detailed report of the receipts and expenses of the House of the Good Shepherd for the fiscal year ending June 30, 1889.

In submitting the report we would say that there are now 43 inmates, in the institution. There have been received during the year 20 inmates, of whom 2 have left the institution, having reformed their course of life.

The Congress of the United States at its last session appropriated the sum of $15,000 for the purpose of erecting a building for our institution. We had previously purchased certain property in the city of Georgetown, and propose erecting a building thereon, now in course of construction, which, when completed, will accommodate at least 100 inmates, excluding the sisters in charge of the department.

Since that appropriation there have been received at the house in this city 14 inmates, who have been sent there by the police authorities of the District.

We are informed that there is no institution having the same object in view in this District, and we learn from the police authorities that the necessity for such an institution is very great. We would therefore request that you would investigate the workings of the house, and if meeting your approval, you would recommend to the Congress that this institution be placed in the category of charitable institutions in this city receiving annual support from the Government of the United States. We have never refused to receive any person sent by the authorities, and while at the present time, owing to the contracted quarters, we are somewhat overcrowded, we are in hopes that upon the completion of the new building we can meet the requirements of the community, to protect and reclaim the class of persons which it is sought to benefit.

Respectfully submitted.

Sister M. MARTIN,
Superior.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Report of the House of the Good Shepherd from the month of June, 1888, to June, 1889.

EXPENSES.

Bread, meat, groceries, and provisions	$1,335.31
Shoes and clothing	384.27
Fuel and gas	266.84
Interest on debt, taxes, and insurance	345.92
Medicines	68.17
Chinaware	14.83
Sewing-machines	29.41
Car-fare	21.88
Stationery	21.92
Plumbers	14.50
Express	9.74
Incidental expenses	60.91
	2,573.70

INCOME.

Donations	230.88
Shop-work	943.43
Fine sewing	1,550.92
	2,695.23

Inmates received from August 16, 1883	145
Inmates in the house at present	43
Sisters	11
Inmates received from the month of June, 1888, to June, 1889	20

Of this number 14 were brought by officers, 5 by their parents, and 1 came voluntarily. Two inmates returned to their parents.

F 19.

NATIONAL TEMPERANCE HOME.

WASHINGTON, D. C., *August* 13, 1889.

GENTLEMEN: I have the honor to acknowledge the receipt of your letter of the 1st instant, requesting to be furnished on or before the 15th proximo with an estimate of the amount required for the conduct and support of National Temperance Home for the fiscal year ending June 30, 1889, also a detailed statement of its receipts and expenditures and its operations for the fiscal year ending June 30, 1889, together with any recommendations it is deemed advisable to make with the object of increasing its efficiency.

In reply, I inclose herewith a copy of the annual report for the fiscal year ending June 30, 1889, which contains the statement of receipts and expenditures for said year. Should this statement not be full enough, you will please advise me, and a further one will be prepared and forwarded.

I also submit herewith the following estimate required for fiscal year ending June 30, 1891:

Rent	$420.00
Gas	100.00
Fuel	150.00
Superintendent's salary	360.00
Matron's salary	300.00
Cook's wages	120.00
Chambermaid's wages	120.00
Household and kitchen furnishing	280.00
Repairs, etc	150.00
Provisions, groceries, etc	1,000.00
Total	3,000.00

As will be seen, this amount is an increase of $500 over the present sum allowed. The needs of the home have naturally grown in the past year, in consequence of its becoming more thoroughly established and more widely known, and therefore will cause an increase in expenditures.

At present we occupy a house encumbered by rental, and are often obliged to refuse worthy applicants for want of room; and, as will be seen by further reference to the report, we desire to have accommodations for the treatment of a limited number of inebriates, and we would therefore most respectfully recommend that a house and grounds be secured for the use of those who come to us for help and shelter. The house to be of greater dimensions than the present one, conveniently arranged and in good condition, containing a basement which can be used for industries, which will eventually be a source of revenue to the home, and aid those who come under its roof without the means to pay their way.

I am, very respectfully, your obedient servant,

LENA M. HANSMANN,
Treasurer National Temperance Home.

Approved:

LAVINIA H. CHASE,
President.

THE COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Treasurer's report for the year ending June 30, 1889.

The United States in account with Miss Lena M. Hansmann, treasurer of the National Temperance Home, Washington, D. C.

DR.			CR.
To Rent of building, 329 Missouri ave., NW	$484.67	By amount of appropriation received during fiscal year ended June 30, 1889	$2,500.00
Fuel	139.58		
Gas	83.31		
Printing	34.00		
Fire insurance	10.00		
Groceries and provisions	435 92		
Salaries and wages	651.66		
Household and kitchen furnishing	655.36		
Repairs	5.50		
Total	2,500.00	Total	2,500.00

The National Temperance Home in account with Miss Lena M. Hansmann, treasurer.

DR.			CR.
To Household expenses and provisions	$1,445.55	By cash on hand July 1, 1888	$2.30
Water-rent	7.33	Received for meals	1,101.10
Gas	6.48	Received for lodgings	344.45
Advertising and printing	25.03	Individual donations	108.06
Stationery	1.60	Church collections	21.09
Household supplies	18.21		
Paint	3.70		
Certified copy incorporation certificate	2.50		
Payment on organ	5.00		
Miscellaneous	16.80		
Christmas festival	20.80		
Rubber-stamp	2.00		
Entertainments	15.00		
	1,570.00		1,577.00
Total expenditures	4,070.00	Total receipts	4,077.00

Lodgings paid for	1,653
Lodgings free	1,466
Total lodgings	3,119
Meals paid for	4,074
Meals free	2,775
Total meals	6,849
Receipts for meals	$1,101.10
Receipts for lodgings	344.45
Total	1,445.55

Months.	No. of guests.	No. of free guests.	No. of ex-soldiers and sailors.
1888.			
July	68	17	54
August	62	27	46
September	71	18	48
October	97	56	53
November	56	28	42
December	60	38	47
1889.			
January	124	79	85
February	91	69	59
March	126	65	63
April	86	59	32
May	84	48	42
June	98	39	68
Total	1,023	543	639

Nationalities of guests.

Americans	624	Germans	137
Russians	7	Finns	1
Irish	181	English	66
Swiss	6		
Spanish	1	Total	1,023

Donations to the building fund.

Rowan, Mrs. Agnes	$1.00	Halsey, Mrs	$1.00
Smith, Mrs. Fannie C	1.00	Lawton, Mrs. C	5.00
Powell, Mrs. A. G	1.00		
Fawcett, Mrs. I	1.00	Total	10.00

Individual donations.

Adams, Byron	$1.50	Mahoney, J. R	$1.00
Baker, S. E	5.00	McLean, J. R	6.00
Bonnell, G. W	7.00	Meehan, Patrick	5.00
Bureau of Work	3.00	Morgan, Mrs. G. Lawton, from friends	13.75
Chase, Lavinia H	6.80	Poler, J. J	4.00
Contribution box	2.52	Russell, Mrs. E. B	2.00
Contribution cards	8.45	Sargent, D. K	1.00
Diercks, J	5.00	Slaughter, E	1.00
Friends	9.54	Watkins, Mrs. A. K	10.00
Groff, S. A	1.00	Young Peoples' Society, New York Avenue Church	12.00
Hamilton, Thomas	1.00		
Horsman, Mrs. S	.50		
Maas, Marx	1.00	Total	108.06

Collections.

Metropolitan M. E. Church	$15.93
Calvary Baptist Church	5.16
Total	21.09

Donations to National Temperance Home of furniture, clothing, groceries, provisions, cake, books, literature, etc., which we gratefully acknowledge.

Adams, Mrs. Jane F.
Adams Express Company.
Adams, Byron S.
Andrews, Mrs. F. V.
Andrews, Miss Frances.
Appich, J. J.
Barber & Ross.
Barbour & Hamilton.
Baum, Charles.
Beall & Baker.
Bergman, Mrs. Emma.
Breuninger & Vandeventer.
Brooks, E. F.
Buckalew, J. R.
Burchard & Co.
Burchell, N. W.
Bushby, Mrs. L. E.
Carhart & Leidy.
Chase, Miss L. H.
Crosby, Mrs. H. E.
Davis, E. S.
Douglas, William O., & Bro.
Draime, Mrs. Anne.
Edwards, Mrs. Samuel.
Edwards, Mr.
Ewald, Mrs. H. C.
Fawcett, Mrs. Isabella D.
Fawcett, Miss Gertie.
Franklin, Mrs. S. T.
Freund, F.
Frazier, Frank ($5 on type-writer).
Fussel, J.
Galt, William M., & Co.
Gibson, Mrs. H. G.
Griffith, Edgar.
Great Falls Ice Company.
Hansmann, Dr. Theo.
Hansmann, Miss Lena.
Hall, T. H.
Hinkie & Budd.
Hoeke, William H.
Horsman, Mrs. Sadie.
Huyler, Mr.
Independent Ice Company.
Jacobson, H.
Jarvis, Thomas.
Jennings, Sargeant.
Johnson, V. Baldwin.
King, S. A., jr.
Keitch, Mrs.
Kirby, Miss Helen.
Kennedy, George A., & Son.
Kingbury, Mrs. Annie E.
Knox, George.
Lansburgh & Bro.
Lansburgh, Julius.
LaFetra, Mrs. S. D.
Lakey, Mrs. L. G.
Laird, Mrs. J. A.
Lawrence, George.
Lawrence & Camalier.
Levy, A. D.
Lockwood, Miss Julia.
Maas, Marx.
Mallette, Charles.
McGruder, J. H.
Meehan, Patrick.
Mills, Miss.
Moffatt, Miss Libbie.
Monroe, Mrs. H. E.
Morgan, Mrs. G. Lawton.
Morgan, Maud.
Morrison, E.
O'Brien, Mrs. H. E.
Powell, Miss Mary.
Powell, Mrs. A. G.
Platt, Mrs. M. B.
Poler, John.
Philadelphia Candy House.
Pool, N. A.
Rankin, Mrs.
Rider & Addison.
Rowan, Mrs. A.
Ryneal, George.
Sargent, D. K.
Saks & Co.
Seymour, Mrs. Gilbert.
Smith, Mrs. Fannie C.
Smith, Emmons S.
Southern Pacific Tea Company.
Stolph, Mrs.
The "Bon Marche."
"The Fair."
Tupper, J. R.
Tyson, Mrs. E.
Watkins, Mrs. Anna K.
Watts, George.
Weed, John W.
Weightman, Miss L. S.
Wiggin, Samuel Adam.
Williams, Mrs. T. A.
W. C. T. U., Independence, N. Y.
W. C. T. U., Rushford, N. Y.
Walker, Miss May.
Whitney, Mrs. C. N.
Wilmarth & Edmonston.
Y. W. C. T. U., Ceres, N. Y.
Y. W. C. T. U. No. 8, Washington, D. C.

Daily, weekly, and monthly papers and magazines donated.

The Army and Navy Register.
The National View.
The Union Signal.
The Evening Star.
The National Issue.
The Republic, Washington, D. C.
The Voice.
The Christian.
The Good Health Journal.
The American Sentinel.
Home Bulletin, Hampton, Va.
Boyd's Directory for 1889.

F 20.

CENTRAL DISPENSARY AND EMERGENCY HOSPITAL.

WASHINGTON, D. C., *September* 14, 1889.

DEAR SIR: In reply to yours of August 1, 1889, requesting a report of the work of the Central Dispensary and Emergency Hospital for the fiscal year ending June 30, 1889, I have the following report to make:

The regular work of the dispensary has been continued with two services daily, except Sunday, and the emergency department open and ready for work all the time. Our number of patients has been steadily increasing, and we find great difficulty in attending to their needs and administering proper treatment on account of the lack of room in our present quarters and the scarcity of money.

The amount of work done, together with the number of patients treated and their classification, is shown by the following table:

Months.	New cases.*								Total.	Total visits.†	Emergency cases.	Prescriptions compounded.
	White.				Colored.							
	Adults.		Children.		Adults.		Children.					
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.				
1888.												
July	98	54	14	19	163	310	44	75	777	1,444	54	2,173
Aug	101	69	19	20	198	293	47	89	836	1,384	92	2,206
Sept	102	68	14	19	183	262	41	71	760	1,562	86	2,073
Oct	103	58	17	14	179	281	49	43	744	1,820	52	2,406
Nov	103	64	29	28	192	322	44	61	843	1,430	48	2,081
Dec	94	49	23	20	156	189	43	70	644	1,469	53	1,898
1889.												
Jan	117	63	19	16	239	327	81	69	831	1,819	52	2,464
Feb	116	53	21	17	119	196	41	52	615	1,528	58	1,906
Mar	152	70	11	12	234	310	162	57	918	1,799	108	2,288
Apr	85	66	10	15	199	296	63	48	782	1,525	52	1,775
May	107	83	19	19	193	267	69	91	852	1,769	100	2,233
June	89	58	15	13	204	279	49	101	758	1,577	87	1,946
Grand total	1,267	755	211	212	2,259	3,332	733	827	9,360	19,126	662	25,452

*New patients (or cases) are those who have not been at the hospital before the month in which they are registered.

†The number of visits in any month designates the number of the patients, whether new or old, who visited the hospital and received attention.

Our receipts and expenditures are shown from the following:

RECEIPTS.

Balance July 1, 1888	$38.13
District appropriation	2,400.00
Private subscriptions	1,083.43
From W. G. Metzerott, for party wall	266.44
	3,788.00

EXPENDITURES.

Salaries and wages	1,548.00
Drugs	1,262.74
Light and fuel	129.00
Printing and stationery	166.90
Sundries, repairs, ice, insurance, etc	286.46
H. Randall Webb (loan returned)	50.00
Balance (bank, July 1, 1889)	344.90
	3,788.00

In view of the constant increase in the number of our patients, it is absolutely necessary to have an increase in the annual appropriation to $4,000.

Recognizing the great inadequacy of our present quarters, and also the fact that no building is suitable for an institution of this kind unless built especially for the purpose, our board of directors have decided to erect such a building, one suitable in every respect for a dispensary and emergency hospital. With this purpose in view, a committee from the board visited the principal institutions of this kind in New York and Baltimore cities, and examined into their construction and administration.

A lot has been purchased on the corner of Fifteenth street and Ohio avenue which will make an excellent site for our new building; it is

central, faces on a public reservation, and has three sides facing on the street. The building we propose to erect on this site will have many features peculiar to itself and embody certain characteristics, which do not at the present moment exist in any institution in the city, the need of which is daily felt.

Besides the regular waiting and service rooms of the dispensary, the wards of the Emergency Hospital, and a lecture room, where any cases of peculiar interest can be shown to students, we propose to build two or three strong rooms for the reception and care of insane persons, and where persons found insensible in the street can be cared for until it is ascertained whether they are suffering from the effects of liquor or from apoplexy. We may also have a room which can be used as a morgue, and where the coroner can hold some of his inquests.

To better illustrate the necessity of rooms of this kind for the care of insane persons, I quote the following from a letter written to Dr. Godding in regard to their erection:

> The importance of such provisions for the temporary custody of cases of frenzy from the cerebral disturbance, arising from alcohol, from sunstroke, and from insanity, can hardly be overestimated. Under the present rulings of the court insane persons can not be sent to the Hospital for the Insane until their mental condition is passed on by a jury. Pending their commitment here (Saint Elizabeth's) or elsewhere, they must be kept at home; in acute cases to the disturbance of their families and the neighborhood, or, if the unfortunates have no home, they are consigned to the station lock-ups or the cells of the Police Court, places illy fitted to the care of any type of insanity, especially so to the acute and violent forms. There should be in this Emergency Hospital not less than two specially fitted and arranged rooms for either sex, so arranged that the noise from them shall not disturb the rest of the building, but under the constant supervision of nurses, where cases of insanity and delirium tremens can be efficiently and humanely cared for pending the action of friends or the decision of the court on their commitment to Saint Elizabeth. To-day there is to my knowledge no such place in Washington that is available for this purpose.

The need of a room for the reception and temporary care of the insane and those who may be suffering from apoplexy or delirium tremens is most urgent, and is one which this city of all others should be provided with, on account of the large number of cranks of one kind and the other who yearly come to our city. Now the only places for such persons are the police station-houses, which, as Dr. Godding says, are most unsuited for such purposes; and cases have occurred where persons suffering from apoplexy, etc., have been mistaken for drunkards and put into cells and have died before the mistake was discovered; and in all cases of insanity the disease has been very much aggravated by the want of a proper room for their reception.

The present daily attendance at our institution averages from sixty to one hundred, and this more than crowds our present accommodations.

The estimated cost of the proposed building is $50,000, and probably less, including the site, and our present building is valued at $15,000, leaving us $35,000 to raise.

What we urge upon you is that you assist us before Congress to raise this amount, or a portion of it, and increase our annual appropriation to $4,000. In other words, to help us all in your power to erect a building such as will be a credit to our city, the need of which is felt more and more every day, and which is of a kind peculiar in itself and is not the rival of any other charitable institution in the city, and one which every citizen of the District should take a pride and interest in helping along.

I am, very respectfully yours, H. RANDALL WEBB,
Secretary.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 21.

LITTLE SISTERS OF THE POOR.

WASHINGTON, *August* 5, 1889.

GENTLEMEN: In reply to your note of the 1st instant, we regret that it is not in our power to give you the information as stated in your letter. By reading the inclosed circular you will see that we depend entirely on the charity of the public, that is, two of the sisters go every day in the wagon to the hotels, markets, and stores, in quest of all sorts of provisions that charitable persons are willing to give them; two other sisters go from door to door to collect money, clothing, etc. So you understand that it would be impossible to give you an idea of what it would cost if we had to buy all these things. Certainly we are often obliged to buy large quantities of things, particularly in the summer months, when nearly all our benefactors are out of the city; every year fuel alone costs us nearly $1,000, as our house is very large, containing at present 220 persons, and the aged need their rooms well heated.

Hoping this note will be satisfactory, and at the same time inviting any of you honorable gentleman to visit the Home any day, and will gladly give you any information possible.

Yours, very respectfully,

Sister CLOTILDE,
Superior, Little Sisters of the Poor.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Home for the Aged of the Little Sisters of the Poor, H street, corner Third, northeast.

[Incorporated the 15th of July, 1873.]

This charitable institution was commenced in Washington in the year 1871, and is now supplying the wants of about 220 old men and old women, admitted in the Home without regard to creed, color, or nationality. The conditions of admission are to be infirm, destitute, and of a good moral character, and over sixty years of age.

The sisters have to provide for their inmates food and clothing; to nurse and watch them when sick. They have no fund, they receive no pension, but depend *entirely on charity*; hence they go around collecting. To them any kind of donation is welcome—old clothing, meat, bread, vegetables, etc., and is called for when requested.

The little sisters have assumed lately a heavy responsibility by enlarging their premises for the accommodation of respectable old colored people. They rely on the well-known liberality of the benevolent of this city to help them in their work of Christian charity.

"Remember the old and infirm poor."

Visitors admitted daily from 11 a. m. to 5 p. m.
The Boundary and Treasury Department cars pass by the Home.

F 22.

NIGHT LODGING HOUSE.

WASHINGTON, D. C., *August* 29, 1889.

GENTLEMEN: The Washington Night Lodging House Association (incorporated) first opened its building on the 4th day of March, 1876, and has ever since continued in active operation. It is exclusively for the benefit of male and female non-residents of the District of Columbia who visit the city in search of work, or having claims against the Government, become financially stranded while awaiting their settlement.

Many of the applicants are ex-soldiers and sailors who are thus substantially assisted while prosecuting just claims that otherwise might be lost to them. The rigid system in force almost totally excludes professional tramps.

Each person is provided with a clean, comfortable bed and night-gown, and is compelled to take a warm bath before retiring. They are also given two substantial meals each day, and are allowed these privileges for three days and nights only, unless there is good reason for their remaining longer, which is discretionary with the officers.

All are admitted after examination by the officers in charge of the police stations and are certified to by them or by the superintendent.

No charge whatever is made for any of these privileges.

During the past year 2,301 persons have been lodged and 5,941 meals given. Since the house was first opened the beds have been occupied 45,699 times and 94,441 meals have been served.

The premises are located at 312 Twelfth street, northwest, next to the fifth precinct station-house. The house is a brick one, with a capacity for 50 beds and the rooms necessary for cooking, bathing, reading, and sitting in. A small library, which is gradually accumulating, is provided for the use of the inmates and affords them needed entertainment.

It is proposed to tear down a portion of the back building for the purpose of increasing the capacity of the dormitories and to modernize the bath-rooms, lavatories, and closets to conform to the requirements of proper sanitation.

The board of managers are: Matthew G. Emery, Edward J. Stellwagen, A. S. Solomons, John T. Mitchell, Ed. F. Simpson, George E. Lemon, F. B. McGuire, Wm. Ballantyne, James E. Fitch, A. C. Richards, Charles E. Foster, and Charles J. Bell.

It is respectfully asked, on account of the increased demand from most worthy applicants upon the hospitality of the Lodging House, that the present yearly grant from the District of $400 be increased to $600, which, aside from a few subscriptions from benevolent individuals, is all that it has for its support.

The Lodging House is owned by the association and is free from debt.

Respectfully submitted.

A. S. SOLOMONS,
President.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF THE TREASURER.

WASHINGTON, D. C., *September* 12, 1889.

GENTLEMEN: As requested in your circular of August 1, I enclose statement for year ending June 30, 1889. A statement showing operations of the institution has already been filed with you by the president. The estimated amount required for year ending June 30, 1891, for running expenses will be $800.

Yours truly,

C. J. BELL,
Treasurer Night Lodging House Association.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Night Lodging House Association, year ending June 30, 1889.

RECEIPTS.

District of Columbia appropriation, June 30, 1888	$400.00
Balance (raised by private subscriptions)	455.68
	855.68

EXPENSES.

Wages	225.00
Food	319.53
Heat and light	115.47
Interest on debt	72.50
Sundries, repairs, washing, insurance, etc	123.18
	855.68

C. J. BELL,
Treasurer Night Lodging House Association.

F 23.

THE COLUMBIA INSTITUTION FOR THE DEAF AND DUMB.

WASHINGTON, D. C., *August* 1, 1889.

GENTLEMEN: As required by an act of Congress approved March 3, 1889, I beg leave to transmit herewith an estimate, in duplicate, of the amount needed to provide for the care and education of deaf-mutes belonging to this District in this institution during the fiscal year ending June 30, 1891.

The estimate, $10,500, is based on the probable number of thirty beneficiaries, at a per capita cost of $350. There is good reason to believe that the number of thirty pupils will be reached, if not exceeded, during the year now estimated for.

I have the honor to request that this estimate may be submitted to Congress, and remain,

Very respectfully, yours,

E. M. GALLAUDET,
President.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1891, by the Columbia Institution for the Deaf and Dumb.

Current expenses:

For the care and education of the deaf and dumb of teachable age belonging to the District of Columbia, as provided for in section 4864 of the Revised Statutes, ten thousand five hundred dollars (page 949, section 4864) $10,500

F 24.

GIRLS' REFORM SCHOOL.

BOARD OF TRUSTEES GIRLS' REFORM SCHOOL,
Washington, D. C., September 15, 1889.

GENTLEMEN: I hereby respectfully call your attention to the necessity of including in your estimates for the ensuing year a sum sufficient to purchase site, erection of buildings, and furnishing same for the use of the Girls' Reform School.

I ask for $30,000 for the purchase of the site and erection of buildings, $10,000 for the furnishing same, and $10,000 for the support of same for the first fiscal year.

I will suggest that the appropriation be so worded that a site with buildings on it may be purchased if deemed best.

Very respectfully, your obedient servant,

MILLS DEAN,
Secretary of the Board of Trustees of the Girls' Reform School.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 25.

CHILDREN'S COUNTRY HOME.

MY DEAR MR. DOUGLASS:

Excuse my writing informally to you, but I do so in the interest of the Children's Country Home, to ask you if you will kindly give me a little information.

The Commissioners of the District a few years ago gave us $100 (from the poor fund, I believe) towards the running expenses, and we are most anxious to know if it would be possible to obtain it this season.

The young ladies and myself have striven hard this spring with the object of going into the new house with only the $3,000 mortgage on it at 5 per cent. This we have accomplished, but our current account has only $300 in it, and we are therefore obliged to appeal to the public, as the list of children is full for the three months and we do not want to close it and thus disappoint them. We therefore trust perhaps that the Commissioners would be willing to help us.

Two children were sent out yesterday, left homeless by the flood.

We have to thank your pastor, Dr. Bartlett, for a charming address at the opening last Saturday.

May I ask you to pardon my intruding upon you, and hoping you will tell me to whom I am to apply,

Believe me, respectfully,

MARY L. WILKES.

F 26.

EASTERN DISPENSARY.

GENTLEMEN: The board of directors of the eastern dispensary, located at No. 311 Third street northeast, have appointed us as a committee to present to you the advantages and necessities of this institution with a view to securing from your honorable body an increased appropriation to enable the board to render proper medical, surgical, and dental treatment to the poor of this city who apply to this institution for charitable aid. This institution was incorporated under the laws of the District of Columbia on the 13th day of April, 1888, and I herewith inclose you a copy of the by-laws and articles of incorporation for your consideration. As you will see by the report of the secretary of the medical board, this institution has treated 883 patients since July 1, 1888, to April 30, 1889. The board has received in voluntary contributions $506.03 during this time, and from the District of Columbia $150. They have expended $502.39 during said time, leaving a balance of $153.64. For want of funds the institution is only moderately equipped to answer the purposes of its founders. Your predecessors last June gave us out of the appropriation "for the relief of the poor" only $300 for the fiscal year of 1889. This sum is wholly inadequate to meet the charitable demands upon the board. To meet increasing demands, we have to request that you will place to the credit of this institution, out of the fund at your disposal "for the relief of the poor," for the fiscal year of 1890, the sum of $1,000. The services of this institution cover the whole of Capitol Hill and part of the city west of the Capitol, and we feel that we have claims upon said appropriation which merit your favorable consideration. This is a bona fide and worthy institution, and with increased assistance the board feel that they can accomplish great good among the destitute poor.

We have the honor to remain, very truly, yours,

CHARLES C. LANCASTER.
CHAS. A. ELLIOT.
THOS. W. SMITH.
W. P. C. HAZEN, M. D.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

WASHINGTON, D. C., *May* 14, 1889.

SIR: In accordance with your request of May 5, 1889, I have to report as follows: Number of patients admitted to the dispensary from July 1, 1888, to April 30, 1889, 883. They were admitted as follows: July, 142; August, 106; September, 74; October, 87; November, 68; December, 74; January, 1889, 75; February, 63; March, 97; April, 99; Total, 883. White, 111; colored, 772; total, 883.

Very respectfully,

LLEWELLYN ELIOT,
Secretary Attending Staff.

C. C. LANCASTER, Esq.,
President Board Directors Eastern Dispensary.

STATEMENT OF THE TREASURER.

Receipts from private sources.

1888.		
	Cash on hand	$115.92
Aug. 1.	Mrs. E. Stone	5.00
	Mrs. Lowenthall	10.00
	Dr. Harrison (tickets)	1.00
25.	Dr. Chamberlain	50.00
1889.		
Jan. 17.	Dr. W. P. Hazen	5.00
24.	Dr. George C. Ober	5.00
	Dr. Chamberlain	1.35
	O. H. Coumbe	5.00
31.	George T. Harbin	5.00
	J. F. Meyer	5.00
	S. Fishman	5.00
	Elia Chelini	5.00
Feb. 15.	Mrs. Seymour W. Tullock	5.00
	Mary L. Norton	25.00
	Mrs. M. I. Millson	5.00
19.	George Ryneal	5.00
	Mrs. L. A. Wood	5.00
	J. C. Baum	5.00
	E. Abner	5.00
	Mrs. E. Wagner	5.00
	Mr. J. P. Ryan	5.00
	Mrs. Charles G. Dulin	15.00
	Charles G. Dulin	5.00
	F. T. Chamberlain	5.00
	Mrs. A. C. North	5.00
	B. F. Queen	5.00
1889.		
Feb. 27.	George Boyd Harrison	$5.00
	Mrs. J. L. Stone Harrison	5.00
	Mrs. E. J. Stone	5.00
	Mrs. Lowenthall	5.00
	Charles A. Elliott	5.00
	C. C. Lancaster	5.00
Mar. 6.	Mrs. Charles Dulin, treasurer	45.00
7.	James Lansburgh	5.00
12.	Dr. James A. Hunter	5.00
	Dr. Taylor	5.00
	Dr. Elliott	5.00
Apr. 4.	Mrs. Dulin, treasurer	48.00
	Total	461.27
1888.		
Oct. 18.	District government	75.00
1889.		
Jan. 17.	Do	75.00
		611.27
	As per statement rendered April 9, 1889, cash over	44.76
		656.03

Expenses.

1888.		
Aug. 23.	C. Becker	$23.00
	Dr. Chamberlin	50.00
27.	Browning & Middleton	12.16
Sept. 3.	Wescott & Wilcox	16.50
	W. B. Moses & Son	11.86
5.	B. Charlton & Co	4.64
Oct. 2.	Wescott & Wilcox	16.50
5.	Kelly & Chamberlin	6.80
6.	George W. Boyd	43.70
8.	J. P. Wright	6.50
Nov. 2.	Wescott & Wilcox	16.50
9.	Krouse & Coffman	4.00
22.	George W. Boyd	22.65
Dec. 1.	Wescott & Wilcox	16.50
1889.		
Jan. 1.	V. Baldwin Johnson	2.90
3.	Wescott & Wilcox	16.50
5.	George W. Boyd	19.70
12.	J. P. Wright	12.00
1889.		
Feb. 1.	George W. Boyd	$28.95
1.	V. Baldwin Johnson	6.70
6.	Wescott & Wilcox	16.50
Mar. 2.	Wescott & Wilcox	16.50
11.	C. C. Lancaster	28.50
Feb. 8.	J. P. Wright	1.75
27.	Charles Sickles	15.00
	S. N. Meyers	7.00
	R. Beresford	11.50
Mar. 16.	Elia Chelini	14.23
Apr. 2.	Wescott & Wilcox	16.50
5.	George W. Boyd	34.85
	J. P. Wright	2.00
		502.39
May 1.	Cash on hand	153.64
		656.03

EMMONS S. SMITH, *Treasurer Eastern Dispensary.*

HEALTH DEPARTMENT, DISTRICT OF COLUMBIA,

Washington, June 21, 1889.

GENTLEMEN: I have the honor to return herewith communication numbered 157,451, being letter and papers of Chas. C. Lancaster *et al.*, directors of the eastern dispensary, asking an increase in the apportionment to this institution from the appropriation for the relief of the poor.

That this institution is a worthy one, deserving of every encouragement and assistance, there is no doubt, and I would be glad if the Commissioners may find it in their power to aid the promoters thereof in their good work. I must take this occasion to say, however, that the first and most important labor to be performed in the interest of the indigent sick is that the bedridden ones be provided for at their homes. Work of this character is increasing annually without increase of appropriation. My only recommendation in this case is that the needs of the service, performed by salaried officers, be amply provided for before any allotment whatever be made to the volunteer institutions. The amount of work performed by the different institutions might then be taken into consideration and the apportionment made accordingly.

It is my opinion that the District should have control, of some sort, in every instance where its funds are being expended.

After providing for compensation for physicians to the poor I would ask that the fund for medicines and other expenses be increased to the sum of $4,000 from the appropriation referred to.

Very respectfully,

SMITH TOWNSHEND, M. D.,
Health Officer.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

CONSTITUTION AND BY-LAWS OF THE EASTERN DISPENSARY.

ARTICLE I.

SECTION 1. The government of the institution shall be vested in a board of directors, fifteen in number, of which seven shall be selected from the contributing members and seven from the membership of the medical association of the District of Columbia, and one a graduate of dentistry. The eight medical members to compose the attending staff of the institution.

SEC. 2. The foregoing seven non-medical members of the board of directors shall be elected annually by the contributing members on the first Tuesday following the 1st day of March, as hereinafter provided.

SEC. 3. In case it should happen that an election of the non-medical directors did not take place on the day designated it shall be lawful on any other day to hold such election in such manner as may be decided upon by the majority of the directors, who shall hold their offices until their successors are duly elected, due notice of such date being given the contributing members.

SEC. 4. The board of directors shall make all necessary rules and regulations for the government of the institution; shall have power to provide suitable buildings and all necessary appliances for the dispensary, and make and carry into effect all necessary arrangements for the support of the same.

ARTICLE II.

SECTION 1. Any adult person who shall contribute for the benefit of the institution the sum of $5 shall, by virtue thereof, become a member thereof, and shall continue to be so for the space of the current dispensary year during which the contribution is made, said dispensary year to commence on the first Tuesday following the 1st day of February, on or before which date all annual contributions are considered due. No contributor shall be allowed to vote at such annual meeting unless his annual dues shall have been paid.

ARTICLE III.

SECTION 1. The contributing members shall, on the first Tuesday following the 1st day of February next ensuing, and yearly thereafter on the first Tuesday following the 1st day of March, meet at some convenient place in the city of Washington, to be fixed upon each year by the board of directors of this institution, and a majority of them as shall so meet shall, by ballot, elect the non-medical directors for the year ensuing, who shall immediately enter upon the said office and hold the same

from the time of such election for and during the space of one year and until others are elected in their stead. Voting by proxy will not be recognized or allowed. In case any of the said persons elected to be directors shall die or remove from the District of Columbia before the time of their appointed service, or shall refuse or neglect to act in or execute the said office, then, and in every such case, the remaining directors shall, within thirty days thereafter, by ballot, elect another or others of the contributing members instead of the persons so dying or so removing, refusing, or neglecting to act; and such person or persons as shall have the greatest number of votes at every such election shall hold their said offices from the time of such election until the first Tuesday following the 1st day of February then next ensuing, or until another or others be chosen instead of such person or persons.

ARTICLE IV.

SECTION 1. The officers of the institution shall be a president, a vice-president, a secretary, and a treasurer, to be chosen annually by a two-thirds vote of the entire board of directors, from their numbers, at a meeting to be held one week after the regular annual election. These officers shall continue to serve until their successors are elected.

ARTICLE V.

SECTION 1. The details of the management of the dispensary shall devolve upon the executive committee, to consist of eleven directors (to be elected annually by the board from its own members), seven of whom shall constitute a quorum for the transaction of business. This committee shall meet on the second Monday of each month, and shall report to the board at least once in every three months. The officers of this board shall be the ex-officio officers of this committee.

SEC. 2. There shall be a finance committee, consisting of three directors, of whom the treasurer shall be one. It shall have the entire supervision of the fiscal affairs of the institution; direct the place of deposit of the funds on hand, and make investment of the moneys belonging to the dispensary, subject to the approval of the board of directors. It shall direct all disbursements and be responsible for any expenditures made by them, and report at each stated meeting of the board of directors or executive committee. One of the attending staff shall be a member of this committee.

SEC. 3. There shall be a committee on supplies, consisting of three directors, one being the executive officer of the attending staff. It shall furnish estimates of all articles needed for use in the dispensary, and record the same in a book to be kept for that purpose, such estimates to be approved by the finance committee. It shall have the general care and superintendence of the dispensary building, and keep the same in repair, and shall meet on the last Tuesday of each month.

SEC. 4. The committee on finance and the committee on supplies shall be appointed by the president immediately after the annual meeting in March, and shall serve for one year thereafter ensuing or until their successors are duly chosen.

SEC. 5. The president of the board of directors shall be *ex officio* a member of each standing committee.

ARTICLE VI.

SECTION 1. There shall be an attending staff, consisting of the eight medical members of the board of directors, who shall hold their offices continuously for a period of three years from the date of the adoption of these by-laws and who shall not be removed except for cause, and then only after a full and fair trial of any written charges, etc., made against them, and upon a two-thirds concurrent vote of the whole number of the board of directors. All vacancies by death or otherwise before the expiration of the three years shall be filled by nomination, by the surviving members of the attending staff, and confirmed by a two-thirds vote of the board of directors.

SEC. 2. The attending staff shall arrange the diseases treated in this institution into classes, as many as may be deemed necessary, assigning the treatment of said diseases among themselves as they may deem right and proper.

SEC. 3. No change in the number of the attending staff shall be made except by a two-thirds vote of the whole board of directors of the institution present at a regular or special meeting, notice of the proposed change having been given at a previous meeting.

SEC. 4. No physician shall be a member of the attending staff or consulting board or appointed to any service in the dispensary unless he be a graduate from a regularly incorporated medical college, a member of the medical association of the District of Columbia, and also a regular practitioner of medicine in said District.

SEC. 5. Each member of the attending staff shall, in rotation, serve for one month as executive officer of the dispensary, and be responsible for its management.

SEC. 6. Whenever deemed necessary by the attending staff there may be elected by said staff one or more assistants, said assistant or assistants being in all matters of dispensary service subject to the direction of the attending staff.

SEC. 7. It shall be the duty of the attending physicians, during their time of service, to prescribe for and direct the treatment of all patients under their charge. They shall each visit the dispensary at least twice a week between the hours of 1 p. m. and 3 p. m., and shall enter their names at each visit in a register kept for that purpose.

SEC. 8. In case of prolonged detention or absence from the city of a member of the attending staff, he shall procure the service of one of the other attending physicians or assistants in his stead, provided such absence or detention shall not exceed two weeks, unless previously excused by the attending staff, and every such absence or detention shall be reported to the board, together with the fact that such absence was excused or not.

SEC. 9. In order to subserve the cause of medical science and education, the attending staff may provide clinical instruction to be given in the dispensary by the attending physicians, at times to be agreed upon by themselves. Students may also be admitted to the dispensary service.

SEC. 10. No operation requiring the administration of an anæsthetic shall be performed unless there be present at least two of the physicians attached to the dispensary, one of these physicians being a member of the attending staff.

SEC. 11. The attending staff shall report in writing to the board of directors, at its monthly meeting, the general condition of the dispensary, the number of patients treated during the month, with those under treatment, giving the nature of the disease or injury of each. They shall state whether the assistants or employés have satisfactorily performed their duties, and shall also recommend any modification or improvement in the general management of the dispensary which they may deem proper.

SEC. 12. At the close of each year a tabulated list of the diseases treated during the preceding twelve months shall be made out and incorporated with the annual report of the board of directors. This table shall be prepared by the attending staff.

SEC. 13. Each attending physician shall enter in a register to be kept for that purpose in the prescribing-room, the name, age, color, sex, disease, and treatment of each patient treated by him or his assistants in his class, and state the result of each case when known.

SEC. 14. Each physicians hall make his prescriptions in writing, and furnish plain directions for taking such medicines as he may prescribe.

SEC. 15. The attending staff may elect a graduate in medicine to serve as resident physician, should such service be required, whose duty it shall be to examine and register all persons applying for treatment during dispensary hours. He shall furnish to each patient so registered a card with the registered number and class to which assigned. Should the patient be registered on a day other than on the one to which class he or she properly belongs, a prescription will be given for medicine to last until the next service-day of that class, if the urgency of the case demands. He shall in all matters be subject to the direction of the attending staff.

SEC. 16. The resident physician so elected shall register the name, age, nativity, color, sex, residence, occupation, and diagnosis of such patient in a general-register book provided for that purpose, which book shall be accessible at all times to the inspection of members of the board of directors, and to such other person as they may direct.

SEC. 17. There may, in like manner, be elected by the attending staff, a resident student, who shall perform such duties as shall be assigned to him by the resident physician or the attending staff.

ARTICLE VII.

SECTION 1. There shall be a consulting board consisting of seven members of the medical association of the District of Columbia, to be elected annually on the third Tuesday following the 1st day of March, by the medical directors of this institution.

ARTICLE VIII.

SECTION 1. The lady-contributing members are empowered and requested to effect an organization (with a view to further the interests of the institution) to be known as a "Ladies' Aid Society."

ARTICLE IX.

SECTION 1. The regular meetings of the board shall be held on the second Tuesday of each month. Special meetings may be called by the president or any four directors.

ARTICLE X.

SECTION 1. The order of business at all stated meetings of the board and of the executive committee shall be: First, names of members present, noted; second, minutes of the preceding meeting read; third, communications from attending staff; fourth, report of treasurer; fifth, reports of committees; sixth, other business.

SEC. 2. All questions of order at the meetings of the board or of the executive committee shall be decided by the presiding officer, without debate, subject to an appeal to the board or the executive committee, and no member, if objection be made, shall speak more than twice on the same question without the consent of the board or of the executive committee.

SEC. 3. All reports of committees, motions, resolutions, and notices shall be offered in writing, unless otherwise permitted by the board or the executive committee.

ARTICLE XI.

SECTION 1. It shall be the duty of the president to preside at all meetings of the board, to sign all contracts or other papers affecting the monetary interests of the institution, when directed to do so by the board of directors; to call extra meetings whenever he deems it expedient, or shall be requested to do so by any four directors; to visit the dispensary at least once each month during his term of office.

SEC. 2. If the president shall be absent from any meeting it shall be the duty of the vice-president to preside; and in case the person elected to the office of president shall be dead, incapable of acting, or absent, the vice-president shall perform all the duties of that office. If both the president and the vice-president be absent, a chairman shall be chosen from the directors present, with the full powers of the office of president.

SEC. 3. The secretary shall keep full and fair minutes of the proceedings of the board of directors, issue notices of all meetings and furnish the committees with notices of their appointment.

SEC. 4. It shall be the duty of the treasurer to receive, receipt for, and keep all moneys paid into and belonging to the institution. He shall pay no moneys out except upon orders approved by the finance committee, unless otherwise directed by a majority of the board of directors; he shall, whenever practicable, obtain and preserve vouchers after such manner and form as the finance committee may prescribe; he shall give an exhibit of the financial condition of the dispensary at each stated meeting of the board of directors; he shall give such bond as may be required by the board of directors, and he shall report in detail all moneys received and expended during each month.

ARTICLE XII.

SECTION 1. The attending physicians may bring their students to the dispensary to witness treatment in the different services, but no student shall operate on, or prescribe for, any dispensary patient. Other medical students, under the regulation of the board, may be introduced by any physician of the dispensary, for whose conduct the introducer shall be responsible.

ARTICLE XIII.

SECTION 1. The druggist department may be in charge of an individual who has received a competent education in pharmacy, who shall be elected by the attending staff.

SEC. 2. He shall be in attendance at the dispensary daily (Sunday excepted) from 1 p. m. to 4 p. m.

SEC. 3. He shall prepare, compound, and dispense the medicines prescribed by the physicians, keep a regular file of all prescriptions for reference, and make a report monthly of the number dispensed, and shall be under the immediate direction of the resident physician or attending staff.

SEC. 4. The druggist may be provided with an assistant, upon the election by the attending staff, to aid him in his department, under his direction and control; and the resident physician shall be responsible for the fidelity with which all the business of this department shall be performed.

ARTICLE XIV.

SECTION 1. The janitor, under the direction of the attending staff, shall keep the building in a perfect state of cleanliness, the flagging and steps neatly swept, and build and take care of all fires required. He shall also assist the druggist, and do errands for the establishment. He shall not be absent from the building without the knowledge and the consent of the resident physician.

ARTICLE XV.

SECTION 1. The resident physician, druggist, janitor, and any assistant authorized by the board of directors, shall receive such compensation for services as shall be determined upon by the board of directors, payable in equal monthly payments, or pro rata for less than a month.

SEC. 2. No member of the attending staff, assistant physician, or student shall receive any emolument, pecuniary or otherwise, for services rendered to a dispensary patient in or out of the institution so long as such patient shall be continued on the books of the institution.

ARTICLE XVI.

SECTION 1. All persons admitted to the benefits of the dispensary shall conform to the rules and regulations of the institution, and the directions and prescriptions of the physicians, in regard to medicine, diet, and other matters necessary to their recovery; and take care of, cleanse, and return to the dispensary, any phials, gallipots or utensils delivered to them, and in case of neglect or disobedience they shall no longer be entitled to the benefits of the dispensary.

SEC. 2. If any patient shall continue absent from the dispensary for the space of two weeks, such patient shall be considered as discharged.

SEC. 3. The physicians shall reject unworthy applicants, and such as in their judgment are not entitled to the benefits of the dispensary, and may require all patients to furnish satisfactory references that they are bona fide subjects of charity. The reasons of such rejection shall be entered upon the register.

SEC. 4. No person applying for medical aid shall be refused treatment on account of race, color, previous condition, or religion. This institution shall be non-sectarian, non-political and non-collegiate, and shall treat all worthy applicants, reserving the right to reject all unworthy subjects, and those able to pay for treatment or medicines.

SEC. 5. Changing from seats or place assigned to patients, spitting on the floors, and loud noise, will not be permitted, but order and decorum must be maintained while in the building.

SEC. 6. As soon as patients are prescribed for, or furnished with medicines, they shall immediately retire. No smoking in the dispensary by students or patients will be allowed.

ARTICLE XVII.

SECTION 1. These by-laws shall not be altered unless notice shall have been given in writing at least one month previous to that at which action of the board shall be had thereon, specifying the article and section proposed to be amended, or that a new article or section is to be added; nor shall such alteration be made unless the notice for the meeting shall state that an alteration is proposed in the by-laws. All such alterations shall require a two-thirds vote of the entire board of directors.

F 27.

HOME FOR INCURABLES.

The board of managers of the Home for Incurables would earnestly solicit your attention to this most worthy charity, as we are really relieving the city of the suffering poor, who would otherwise be thrown on the District for support. We have, with the most untiring zeal, raised the means to start the Home, but need help to carry it on. The property is situated on Meridian avenue, Mount Pleasant, fronting 300 feet on that square, and wish to extend the same, as the want is now very urgent for more accommodations. We ask that you appropriate the sum of $5,000 to free us from debt, and enable us to add one more most needed charity to our District.

Hoping that you will report favorably, I am, respectfully,

Mrs. E. SNOWDEN BELL,
Vice-President.
For Mrs. SIDNEY EVERETT,
President.

F 28.

HOMEOPATHIC FREE DISPENSARY.

WASHINGTON, *June* 25, 1889.

GENTLEMEN: It has been the custom of the Homeopathic Free Dispensary to report the work it has done to the Commissioners before the close of each fiscal year. With this I inclose a printed report to November 1, 1888, and a written report, of patients and prescriptions, from the secretary, and financial report from the treasurer, from November 1, 1888, to June 22, 1889.

The balance on hand is due to the special efforts made by the ladies to secure in advance a sum sufficient to meet expenses for the months of July, August, September, and October. During these months the friends of the dispensary are out of the city, and no effort can be made to raise the money as it is needed.

The ladies in charge of this charity hope for a continuance of the allotment of $300 made to them last year for the purchase of "medicines for the homeopathic physician to the poor," and for the dispensary.

There is great need for another homeopathic physician to the poor, and the ladies respectfully urge such an appointment. In the year 1885–'86 two homeopaths were employed by the health office, and as you will see by reference to the fourth annual report, inclosed with this, Dr. Charles F. Goodell, who answered the calls of the southern half of the city, made from October 1, 1885, to October 31, 1886, 2,436 visits, and prescribed 569 times in his office. Dr. Edgar Janney served the northern half of the city from August 1, 1885, to September 1, 1886, when he was summarily removed. He reports that he made in that time 2,523 visits, and gave prescriptions to 1,101 patients at his home. These statements can be verified by reference to the books of the health office for that year, and will compare favorably with the amount of work done by any one of the ten physicians of the other school employed by that office, especially when it is remembered that each one of the homeopaths was obliged to go over half of the city, while each of the other physicians had but his own tenth of the city to visit. I inclose a letter from Dr. Goodell, the present homeopathic employé, which tells of the work he has done and the need for other physicians of his school.

To the $300 allotted to the dispensary for the purchase of medicines for the poor the ladies respectfully beg that an additional sum of $1,200 per annum be given to the dispensary. No salaries have ever been paid except to the janitor, and no help has ever been received from the General Government. Three hundred dollars is allowed for medicine to each of the allopahthic physicians to the poor, and that sum is the largest amount ever allotted for one year to the dispensary. The present current expenses are about $100 each month. With this sum secured to them, the ladies feel that they will be enabled to open an emergency room or rooms and to employ a resident physician. The location of the dispensary, corner Ninth and G streets, is central and convenient, and the physicians constantly urge the necessity for such accommodation.

The Central Dispensary and Emergency Hospital (allopathic) has received $2,400 for each of many years. The Homeopathic Dispensary only asks for half that amount, in addition to the $300 required for medicines for the poor.

This simple statement of facts is, I think, sufficiently clear and urgent to place the matter properly before you, and to assure you that what is asked is a real need and a just claim. As such, I am satisfied to leave it in your hands, trusting for a generous and favorable consideration of the reports and petitions.

Very respectfully,

ISOBEL H. LENMAN,
President Homeopathic Free Dispensary.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

WASHINGTON, *June* 26, 1889.

DEAR SIR: I send with this the letter you suggested, in which I have stated the needs of the Homeopathic Free Dispensary; also, reports of the work done there since the close of our year, November 1, 1888. I find since writing that letter that there are now twelve allopathic physicians to the poor; so the districts are even smaller than heretofore.

In that connection let me call your attention more particularly to the great need for at least one more homeopath for the poor people. Frequently patients of the dispensary or members of their families are too ill to go there for treatment. Dr. Goodell's office is at 920 B street, southwest. They have neither time nor money to go for him in the cars nor to communicate with him by telephone. There is loss of time in reaching him and in his reaching the patient, and so the poor man is obliged to call in the physician in his district in whose method of treatment he does not believe. What man or woman is there, believing in the other school of treatment, who would not consider this an outrage as well as a hardship? The poor have surely as good claim for a choice in these matters as we have.

Quite recently Dr. Goodell told me of a case: A family living at T and Boundary streets, northwest, had a child ill with diphtheria. Dr. Goodell answered their call, but the child died. Seven other children in the family took the disease and were carried through successfully, but at a great sacrifice of Dr. Goodell's time, as he was obliged to go to them twice a day for several days, and ought to have seen them twice a day for a week at least. The appointment of a physician for the northern part of the city is really an urgent need, and the large number of taxpayers who are homeopaths fully justifies the two representatives of their belief at least it seems so to me. Dr. B. F. Gibbs, of No. 1111 Ninth street, northwest, who has served the dispensary very faithfully since his appointment on the staff, would, I am sure, fill the place most acceptably, and his appointment would be greatly appreciated by all connected with the dispensary. He will have the support of nearly all the physicians of our school, Drs. Gardner, Stearns, Rauterberg, Swormstedt, King, Janny, and others having already signified their approval of his nomination. Dr. Pope will also indorse his application, I am told. He is young and active and really interested in his work, and his location on Ninth street makes him still more eligible for the position. I trust if the appointment is made he will receive it.

In regard to our appeal for means to obtain an emergency-room, let me say distinctly that we do not hope for or expect even half of the work that is done by the Emergency Hospital, though we would be glad to do more if the patients were brought to us. There is a class of patients for whom we are anxious to care, and who come constantly to our physicians. Here is one: A man with a cataract; he lives in South

Washington; our hospital is on Second and N streets—both too far distant for our oculist to go twice or three times a day to see him. He only needs this care for a few days—two or, at most, three days. The central location of the dispensary would make it possible for Dr. King to see him three times a day if it were necessary. Here is another: A boy whose arm was broken some time ago, and badly set or carelessly attended. He has lost the use of the arm. Our physicians felt sure that they could entirely overcome the difficulty if they could have him under their eyes and away from his family for two, or at most, three days. His was not a case for a hospital, in the general intention of such institutions. Both these cases had to go without treatment, because we had no place to care for them, and it is for these patients especially that we desire the means to furnish and keep one or two rooms at the dispensary. Emergency cases would always be received, and cared for as well.

Before closing, permit me to thank you for your kind note in answer to the one I wrote explaining the work we had done for the Johnstown people. I could not believe that such a rumor could have weight, and yet it was very pleasant to know that it had not.

With the hope that you will be able to help the dispensary in its good work among the poor, I remain,

Very respectfully,

ISOBEL H. LENMAN,
President Homeopathic Free Dispensary.

Hon. J. W. DOUGLASS,
Commissioner of the District of Columbia.

P. S.—The treasurer has been delayed in making out her report in proper form, so I can not inclose it with this, but will send it in a day or two. I am very sorry for the delay, but think it best not to delay the other statements.

ISOBEL H. LENMAN.

Report of the Homeopathic Free Dispensary Association from May 1, 1888, to May 1, 1889.

Number of prescriptions	7,995
Number of new patients	3,001

Report of Dr. Charles Goodell, physician at large to the poor.

Total number of patients	1,275
Total number of visits	1,525
Total number of office-calls	361
Cost of conducting dispensary for the year	$1,146.60
Average cost per month	$95.55

EUGENIA N. DAVIS,
Secretary.

Treasurer's account from November 8, 1888, to June 1, 1889.

Cash received November 8, 1888	$137.65
Cash received in November, 1888	70.01
Cash received in December, 1888	85.34
Cash received in January, 1889	163.56
Cash received in February, 1889	177.83
Cash received in March, 1889	87.17
Cash received in April, 1889	164.77
Cash received in May, 1889	83.05
Total	969.38

Cash expended in November, 1888	$14.00
Cash expended in December, 1888	146.40
Cash expended in January, 1889	127.08
Cash expended in February, 1889	109.60
Cash expended in March, 1889	102.43
Cash expended in April, 1889	72.56
Cash expended in May, 1889	99.63
Total	671.70
Cash on hand June 1, 1889	297.68

BESSIE RUTHERFORD,
Treasurer.

Tabulated statement of expenditures and receipts from November 1, 1888, to June 26, 1889.

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	To June 26.	Total.
EXPENSES.									
Rent	$45.00	$45.00	$45.00	$45.00	$45.00	$45.00	$45.00	$45.00	$360.00
Janitor and washing	6.00	6.00	8.00	8.00	8.00	8.00	8.00	8.00	60.00
Fuel	.....	8.37	6.00	7.88	10.38	.....	.....	.....	32.63
Gas	.....	.....	.....	3.00	1.00	1.00	1.00	1.00	7.00
Medical supplies	1.25	33.76	24.69	21.95	14.67	10.17	24.58	14.45	145.52
Physician to the poor	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	64.00
Stationery and postage	2.50	.48	.84	3.33	.30	.39	1.05	1.66	10.55
Printing	.....	42.50	6.00	.....	.....	.....	12.00	.....	60.50
Furniture	.....	2.29	.40	5.54	9.97	.....	.....	.....	18.20
Repairs	13.00	.....	.....	6.90	5.11	.....	.....	.....	25.01
Anti-freezer	.....	.....	25.00	.....	.....	.....	.....	.....	25.00
Railroad ticket	.....	.....	.....	.....	.....	.....	.....	9.25	9.25
Sundries	.....	.....	.....	.....	.....	.....	.....	.15	.15
Total	75.75	146.40	123.93	109.60	102.43	72.56	99.63	87.51	817.81
RECEIPTS.									
Active members	23.00	6.00	6.00	7.00	2.00	3.00	1.00	.....	48.00
Associate members	4.00	.....	2.00	.....	.....	.....	.....	.....	6.00
Annual subscriptions	1.00	33.00	106.00	17.00	.....	.....	.50	.....	157.50
Monthly subscriptions	13.25	13.75	6.75	6.25	9.00	6.00	6.50	1.25	62.75
Cash donations	1.80	1.00	.75	8.50	1.50	2.00	.....	.....	15.55
District Commissioners	62.50	.....	.....	.....	62.50	.....	62.50	.....	187.50
Rent of rooms	10.00	10.00	16.00	10.00	10.00	16.00	10.00	10.00	92.00
Fines	.....	.80	.....	1.25	.10	.50	.30	2.50	5.45
Contribution box	.69	2.94	1.06	1.30	2.07	.71	.75	2.24	11.76
Washington Homeopathic Medical Society	.....	.....	25.00	.....	.....	.....	.....	.....	25.00
Teas	.....	2.00	.....	98.38	.....	.....	.....	.....	100.38
Medical and Surgical Club	.....	.....	.....	25.00	.....	.....	.....	.....	25.00
Witmore's entertainment	.....	.....	.....	.....	.....	52.43	.....	.....	52.43
Tea, April 4	.....	.....	.....	.....	.....	84.13	1.50	.....	85.63
Garden party	.....	.....	.....	.....	.....	.....	.....	192.71	192.71
Doll	.....	15.85	.....	.....	.....	.....	.....	.....	15.85
Balance, cash from treasurer	.....	.....	.....	.....	.....	.....	.....	.....	153.17
Total	116.24	85.34	163.56	174.68	87.17	164.77	83.05	208.70	1,236.68
Expenses	.....	.....	.....	.....	.....	.....	.....	.....	817.81
Balance on hand	.....	.....	.....	.....	.....	.....	.....	.....	418.87

WASHINGTON, D. C., *June* 24, 1889.

DEAR MADAM: I inclose herewith a statement of my work as homeopathic physician to the poor (at large) for the past six months.

In doing so I desire to state that there has been a noticeable increase in the demands made upon me by the poor people living in the northern section of the city.

Poor people do not have the time or the facilities for reaching a physician at a distance, consequently great numbers of this class living in the northern section of the city are compelled to do without homeopathic treatment in their families notwithstanding their earnest wish for said treatment. For this same reason my work is principally confined to the people living in my section of the city. It is safe to say that nineteen-twentieths of my calls are made south of Pennsylvania Avenue. I have stated in all of my previous annual reports that a homeopathic physician to the poor was needed in the northern section of the city, and each year makes the necessity all the more urgent. It is next to impossible for me to give proper attention to a patient suffering with typhoid fever or diphtheria who lives in the extreme northern section of the city, by reason of the time consumed in coming the distance, without neglecting just as important cases in my own section.

I trust you will be successful in your efforts this year.

Very truly,

CHAS. F. GOODELL, M. D.,
Homeopathic Physician at Large to the Poor.

Miss ISOBEL H. LENMAN,
President Homeopathic Free Dispensary.

Report for past six months, to June 22, 1889.

Patients treated	619
Whites	245
Colored	374
Males	154
Females	465
Visits made	779
Office consultations	150
Average number of patients per week	25
Average number of visits per week	31

Respectfully submitted,

CHAS. F. GOODELL, M. D.,
Homeopathic Physician at Large to the Poor.

Report of patients treated at the Homeopathic Free Dispensary, 815 G street, northwest, from November 1, 1888, to June 22, 1889, inclusive.

	Number of new patients.	Number of prescriptions.
1888.		
November	358	556
December	249	658
1889.		
January	284	819
February	217	697
March	254	767
April	232	649
May	269	720
To June 22	201	232
Total	2,064	5,398

EUGENE N. DAVIS,
Secretary Homeopathic Free Dispensary.

A true copy of Mrs. Davis's report:

ISOBEL H. LENMAN,
President.

THE HOMEOPATHIC FREE DISPENSARY, 815 G STREET, NORTHWEST.

GENERAL DISEASES.

Mondays and Thursdays, 2 to 3 p. m.....Malcolm Cameron, M. D.
Tuesdays and Fridays, 1 to 2 p. m .....Henry Krogstad, M. D.
Wednesdays and Saturdays, 1 to 2 p. m.....Edward Roome, M. D.
Wednesdays and Saturdays, 3 to 4 p. m.....T. L. Macdonald, M. D.

DISEASES OF WOMEN.

Mondays and Thursdays, 3 to 4 p. m .....Reginald Munson, M. D.
Tuesdays and Fridays, 1 to 3 p. m .....K. D. Barstow, M. D.
Tuesdays and Fridays, 3 to 4 p. m .....Grace Roberts, M. D.

SURGICAL DISEASES.

Wednesdays and Saturdays, 2 to 3 p. m .....J. A. Freer, M. D., chief.
Mondays and Thursdays, 1 to 2 p. m .....Ralf Jenkins, M. D., assistant.

EYE, EAR, AND THROAT DISEASES.

Wednesdays and Saturdays.

1 to 2 p. m, eye and ear diseases..... { W. R. King, M. D., chief. / S. S. Moffatt, M. D., assistant.
2 to 3 p. m., throat diseases.....B. F. Gibbs, M. D., assistant in charge.

Pharmacist.—Charles W. Roberts, M. D.

Physicians-at-large to the poor.—North of F street, north: B. F. Gibbs, M. D., 1111 Ninth street, northwest. South of F street, north: T. L. Macdonald, M. D., 226 Eighth street, southwest.

REPORT.

In herewith submitting the Seventh Annual Report of the Homeopathic Free Dispensary Association, and before entering into specific résumé of the past year's work, it is most gratifying to note that all reports bear evidence to a growing prosperity, gradual but sure, in the condition of the association since its organization was affected, November 7, 1882.

In June, 1889, the President sent to the Commissioners of the District of Columbia a report of the association from November 1, 1888, to June 30, 1889. By this report it was shown that the records of the work for that period compare most favorably with those of former years. Accompanying this report was a petition for an additional sum of $1,200 to aid the dispensary in starting an emergency ward and establishing a resident physician. It was also stated that, in view of the large and growing number of homeopathists in the District, an additional physician of this school should be appointed to visit the poor. In this connection it was shown that there were twelve allopathic physicians to the poor and only one homeopath. In recognition of the justness of this position an additional homeopathic physician to the poor was appointed July 18, 1889. The dispensary was also granted an additional $100, making the present annual appropriation $350. From this amount, however, funds must be provided for the purchase of medicines, etc., for the two physicians to the poor, which leaves a very small sum available for the dispensary.

The report of the attending staff for the past year shows 3,117 patients to have been treated, of which 1,497 were white and 1,620 were colored, the prescriptions for this purpose numbering 8,348. It has always been the wish of the staff to separate the diseases to be treated into special clinics. This plan was partly carried into practice in December, 1888. Diseases of the throat were added to those of the eye and ear, forming together one clinic. Diseases of women were also made a special clinic, as were all cases requiring surgical treatment.

Dr. Charles F. Goodell and his successor, Dr. T. L. Macdonald, as homeopathic physicians-at-large to the poor, report for the year ending October 31, 1889, 1,269 patients, to whom 1,693 visits were made, and 590 prescriptions were issued to patients calling at the office.

Dr. B. Frank Gibbs, who was appointed an additional homeopathic physician-at-large to the poor July 18, 1889, reports that he has had 216 patients, made 389 visits, and prescribed 32 times at his office.

The treasurer, in submitting her annual report, shows a balance on hand of $222, the receipts for the year having been $1,399.07, and the expenditures $1,177.07.

During the season the ladies gave two "teas" at the association rooms, and a "lawn party" at the sanitarium of Dr. Wright, Forest Glen, Md.; the Wittmore

Club also gave an entertainment for the benefit of the dispensary, the aggregate receipts from the four entertainments being $427.65.

The association is largely indebted to its outside friends who have so generously responded to the call of the members in their efforts to successfully maintain the dispensary, and while the expenses have increased, the ladies have been enabled to steadily meet them and the asssoiation has been kept free from debt.

The visiting committee, which has made regular daily inspection of the dispensary, deserve the sincere thanks of all interested in the work; the ladies of which it is composed have been untiring in their efforts for the comfort of every one.

During the past year there have been few changes in the association. In the positive refusal of Mrs. I. M. Bittinger, secretary, and Mrs. A. P. Westcott, treasurer, to accept renomination in their respective positions, old and most valuable officers were lost, much to the regret of the association. These offices were filled by the election of Mrs. Eugenia N. Davis as secretary and Miss Bessie Rutherford as treasurer, the resignation of the latter having been accepted with regret at the October meeting of the directors.

In the attending staff changes have also occurred in the appointments of Drs. Kate D. Barstow, Frank C. Drane, Malcom Cameron, Edward Roome, T. L. Macdonald, H. Krogstad, and Ralph Jenkins; in the resignations of Drs. Frank C. Drane and Charles F. Goodell, by reason of their leaving this city; and in the resignation of Dr. Charles F. Goodell as physician-at-large to the poor, and the appointment of Dr. T. L. Macdonald in his stead. In Dr. Goodell's resignation as physician-at-large to the poor the association has lost a most efficient worker and the poor a true friend.

The resignation of Miss Rebecca S. Hart, the dispensary pharmacist, was accepted with deep regret, her faithful and diligent work of the past year having so well supplemented that of the attending staff. Dr. Charles W. Roberts was appointed to fill the vacancy caused by Miss Hart's resignation.

In the recent death of Mrs. S. R. Green the dispensary lost a true and kind friend, whose memory will ever be held in grateful esteem by all friends of the association. By virtue of her will the sum of $500 was left to Miss Isobel H. Lenham in trust for the association. This sum has been invested in bonds secured by deed of trust. Mrs. Green had always contributed materially to the annual subscription list of the dispensary and to all entertainments for its benefit, and this last kindly act is in consonance with her past goodness.

When the appalling disaster at Johnstown occurred, and when urgent appeals were being make for help for the sufferers, twenty-two boxes of clothing, hospital stores, and other necessaries were collected by the ladies of the association and by them assorted, mended, packed, and forwarded to Miss Clara Barton, the president of the American Red Cross Association. Four boxes were also sent through Health-Officer Dr. Townshend for distribution among the flood sufferers along the Chesapeake and Ohio Canal. These were gratefully acknowledged by Miss Barton and by Dr. Townshend respectively. To the many friends who so quickly and so generously responded to the call for help at this time of distress the association returns its deepest and most earnest thanks, as indeed it does to all the co-laborers and other friends who have so effectively aided it in its work for the entire year.

ISOBEL H. LENMAN,
President.
EUGENIA N. DAVIS,
Secretary.

REPORT OF THE ATTENDING STAFF.

LADIES: The Attending Medical Staff has the honor to herewith submit its seventh annual report.

The work of the dispensary has prospered most satisfactorily during the past year.

At the beginning of the year steps were taken to partially classify the work of the staff, and it was divided as follows: One to two hours each day were given to general diseases; one hour each day to diseases of women, and one hour twice weekly to surgical cases; this in addition to the class of eye and ear diseases already existing, to which class was added diseases of the throat, and two assistants appointed to that branch.

The wisdom of this partial classification, we think, is made apparent by the work as summarized below:

The department of diseases of women shows a decided gain in the amount of work done since the classification. In the surgical department a number of quite important operations were performed during the year.

We would again most respectfully suggest that proper facilities in the shape of suitably furnished rooms be provided as early as practicable for the use of patients requiring minor operations and for emergency cases.

Unfortunately, the past summer has seen the numbers of the staff more than usually reduced by absence from the city, sickness, etc., among its members.

The number of prescriptions issued at the dispensary during the year ending October 31, 1889, was 8,348.

The number of patients treated was 3,117. Of this number, 1,497 were white and 1,620 were colored.

Classified summary.

Diseases affecting the heart and lungs	336
Diseases affecting the digestive system	521
Diseases affecting the nervous system	179
Diseases affecting the genito-urinary system	77
Diseases affecting the eye	338
Diseases affecting the ear	104
Diseases affecting the nose and throat	349
Surgical cases	133
Gynecological cases	445
Rheumatism	201
Scrofulosis	37
Malarial diseases	97
Venereal diseases	62
Debility	21
Skin diseases	164
Acute febrile diseases	10
Not classified	43

The above is a detailed statement of the various classes of cases treated and the number of patients belonging to each class.

Very faithfully,

WILLIAM R. KING, M. D.,
President.
GRACE ROBERTS, M. D.,
Secretary.

The HOMEOPATHIC FREE DISPENSARY ASSOCIATION.

REPORT OF PHYSICIANS-AT-LARGE TO THE POOR.

LADIES: Dr. Chas. E. Goodell, who served so faithfully in the capacity of physician to the poor, resigned on September 30, 1889, and I was appointed to succeed him from that date. It will be seen, therefore, that the credit of the work for the year (the month of October alone excepted) belongs to him. I respectfully append a summary of the work done during the year ending October 31, 1889:

Number of patients	1,269
White	492
Colored	777
Male	364
Female	905
Visits	1,693
Office prescriptions	590

T. L. MACDONALD, M. D.

LADIES: I herewith respectfully submit a summarized report of work done as physician to the poor from the time of my appointment July 18, 1889, to October 31, 1889:

Number of patients	216
White	76
Colored	140
Male	46
Female	170
Visits	389
Office prescriptions	32

B. FRANK GIBBS, M. D.

Totals for the year.

Number of patients	1,485
White	568
Colored	917
Male	410
Female	1,075
Visits	2,082
Office consultations	622

T. L. MACDONALD, M. D.,
B. FRANK GIBBS, M. D.,
Homeopathic Physicians to the Poor.

The HOMEOPATHIC FREE DISPENSARY ASSOCIATION.

REPORT OF THE TREASURER.

LADIES: The undersigned treasurer herewith submits her account of receipts and disbursements during the year ending October 31, 1889, showing of the former $1,399.07, and of the latter $1,177.07, leaving a balance in her hands on that day of $222.

Also statement showing: (1) names of active and associate members; (2) names of annual subscribers, with the amount paid by each; (3) names of monthly subscribers, with the amount paid by each; (4) cash donations and names of donors; (5) miscellaneous donations and names of donors.

All of which is respectfully submitted.

BESSIE RUTHERFORD,
Treasurer.

Receipts.

Cash on hand November 1, 1888	$153.17
Active members	49.00
Annual subscriptions	156.50
Monthly subscriptions	94.75
Cash donations	65.75
Commissioners of the District of Columbia (12 months)	250.00
Contribution boxes	19.50
Membership fines for absence and tardiness at meetings	6.40
Associate members	8.00
Rent of rooms	149.00
Net proceeds of "tea" for dispensary, January 29, 1889	98.38
Net proceeds of "tea" for dispensary, April 2, 1889	84.13
Net proceeds of "garden party" for dispensary, May 15, 1889	192.71
Proceeds of "doll," donated by Miss Eleanor Tyler	15.85
From sale of tickets for "teas," in 1888	3.50
Proceeds of "Wittmore entertainment" for dispensary	52.43
Total	1,399.07

Expenses.

Rent	540.00
Medical supplies	195.26
Printing	60 50
Medical supplies to physicians to poor	124.00
Janitor's wages and washing	94.50
Furniture	19.51
Repairs	25.01
Fuel	42.73
Stationery and postage	12.60
Sundries	.15
Appropriation to pharmacist	15.00
Gas bill	10.50
Water rent	3.00
Anti-freezing apparatus	25.00
Railroad ticket for pharmacist	9.25
Balance on hand October 31, 1889	222.00
Total	1,399.07

BESSIE RUTHERFORD,
Treasurer.

The HOMŒOPATHIC FREE DISPENSARY ASSOCIATION.

NAMES OF ACTIVE MEMBERS OF THE HOMŒOPATHIC FREE DISPENSARY, PAYING $1 ANNUALLY, BEGINNING NOVEMBER 1, 1888.

Mrs. William Birney, Le Droit Park; Miss C. A. Bartlett, 923 Rhode Island avenue; Mrs. C. H. Butler, 236 North Capitol street; Miss Bettine Brown, 914 McPherson Square; Mrs. I. M. Bittinger, 1217 K street; Miss L. E. Bates, 614 H street; Mrs. W. D. Brown, 314 A street southeast; Mrs. L. A. Crandall, 610 H street; Mrs. J. O. Clephane, 1300 New Hampshire avenue; Mrs. P. A. Cleveland, 114 Maryland avenue northeast; Mrs. N. B. Clark, 1442 Rhode Island avenue; Mrs. Frank Claudy, 1109 S street; Mrs. S. A. Duncanson, 923 G street; Mrs. H. A. Davis, 438 New Jersey avenue southeast; Mrs. C. A. Davis, 1013 Sixteenth street; Miss E. C. Duncanson, 18 Second street northeast; Miss Susan Edson, M. D., 1308 I street; Mrs. H. Franc, 736 Fifth street; Mrs. E. S. Freeman, 1756 N street; Mrs. E. O. Graves, 208 E street; Mrs. E. F. Hort, 610 H street; Mrs. Vigil Hillyer, 917 East Capitol street; Mrs. B. W. Holman, 1442 Q street; Miss Margaret Hislop, M. D., 313 M street; Mrs. Marion Hough, 433 G street; Mrs. Edgar Janney, 12 Iowa Circle; Mrs. Alexander Kent, 930 O street; Mrs. W. R. King, 812 Eleventh street; Mrs. J. R. Kelly, 518 Fourth street; Miss Agnes Kennedy, 205 New Jersey avenue northwest; Miss I. H. Lenman, 1100 Twelfth street; Mrs. W. W. Nairn, 1609 S street; Mrs. C. V. Pope, 1109 14th street; Mrs. J. W. Pilling, 1301 Massachusetts avenue; Mrs. B. S. Platt, 802 L street; Mrs. W. O. Roome, 1317 Corcoran street; Mrs. R. G. Rutherford, 1311 Corcoran street; Miss Bessie Rutherford, 1311 Corcoran street; Mrs. S. N. Shields, 1401 Sixteenth street; Mrs. S. A. Stevenson, 623 East Capitol street; Mrs. M. L. Tinker, 114 Maryland avenue, northeast; Mrs. R. W. Tyler, 621 East Capitol street; Mrs. W. L. Van Derlip, 2100 H street; Mrs. C. B. Winslow, M. D., 1 Grant Place; Mrs. Simon Wolf, 1125 Fifth street; Mrs. W. W. Wright, 1302 R street; Mrs. S. A. Williamson, 1325 Eighth street; Mrs. E. B. Wight, 1312 F street; Mrs. Jessie Waite Wright, Forest Glen, Md.

Names of associate members, paying $2 annually.

Mrs. J. B. G. Custis, 110 East Capitol street; Mr. James Lansburgh, 420 Seventh street; Mrs. A. P. Westcott, 1416 Twentieth street; Mr. B. U. Keyser, Third and C streets, northwest.

Annual subscriptions to January 1, 1890.

Washington Gas-Light Company	$50.00	Mrs. Jane Hitz	$5.00
Mr. George McIlhenny	24.00	Dr. F. A. Gardner	5.00
Mrs. S. R. Green	20.00	Mr. Charles Baum	5.00
Mr. John T. Lenman	12.00	In memory of R. H. Taylor	5.00
Miss I. H. Lenman	6.00	Mr. T. J. Murphy	1.00
Mr. B. H. Warner	6.00	General William Birney	1.00
Mr. B. H. Warder	6.00	Mrs. W. R. Lapham	.50
Mr. H. O. Towles	5.00		
Mrs. John W. Field	5.00		156.50

Monthly subscriptions.

Mrs. Kimball, eleven months	$11.00	Kate D. Barstow, M. D., eleven months	$2.75
Mrs. R. G. Rutherford, twelve months	6.00	Mr. Frank Middleton, five months	5.00
A friend, per Dr. F. A. Gardner, eleven months	55.00	Mrs. W. D. Brown, three months	3.00
Capt. R. W. Tyler, four months	4.00	Miss I. H. Lenman, four months	4.00
Mrs. R. W. Tyler, four months	4.00		94.75

Cash donations.

Mrs. Alice Smith	$1.50	Mr. E. O. Graves	1.00
Mrs. W. L. Van Derlip	1.00	Washington Medical and Surgical Club	25.00
Mrs. Madison Davis	1.00	Mrs. S. H. Decker	1.00
Washington Homœopathic Medical Society	25.00	Mrs. Horatio King	1.00
Mrs. J. S. Abbott	.25	Mrs. Hay	1.00
Mrs. N. B. Clark	5.00	Mrs. W. R. Lapham	.50
Mrs. H. J. Wood	1.00		
Mr. Oliver Burdette	.50		65.75
Miss A. Perry	1.00		

Miscellaneous donations.

C. A. Norton, M. D., large supply of drugs; Castle & Henshaw, donation on bill for stores; Mrs. S. R. Green, wood-stove; Messrs. James Lambie and J. T. Lenman, one patent air-spring for door; Mr. James Lambie, wire, tacks, etc.; Mr. P. M. O'Bryon, altering and painting sign; W. H. Orton, racks and checks for use of patients; Mrs. Galloway, keys for cupboard and drawers; Dr. Davis, cherry stain and brush; Mrs. R. G. Rutherford, 2 boxes castile soap and large pitcher; Mrs. E. F. Hort, re-upholstering chair; Mr. George H. Judd, signs for hall; Miss I. H. Lenman, 3 tables, curtains for door, and corner cupboard, clothes-line and pulleys, tablets, etc.; Miss Eleanor Tyler, a large doll; W. R. King, M. D., air-pump, head-mirror, and other instruments; Miss R. S. Hart, roller for bandages; Miss Bartlett, curtains for bath-room, tablets, and cream pitchers; Mr. Scaggs, putting up clothes-line; Mr. Joseph F. Page, use of "Florence oil stoves" for "teas;" Messrs. George M. Oyster, G. G. Cornwell, J. H. Magruder, Elphonzo Youngs, Joseph F. Page, and J. D. Bartlett, donations of coffee, chocolate, etc., for "teas" and "garden party;" Messrs. Willmarth & Edmonston, George Watts, Thomas Jarvis, and F. Freund, for use of dishes, spoons, etc., for "teas" and "garden party;" Mr. F. Freund and Mrs. I. L. Blont, ice-cream for "tea;" Mr. E. Morrison, candy boxes, envelopes, etc.; Judd & Detweiler, tickets and printing; Mrs. R. G. Rutherford, tickets and printing for "garden party;" Mr. Oppenheimer, pinking napkins for "tea;" Mr. John D. Bartlett, Great Falls Ice Company, ice and express charges for sending to Forest Glen; the Independent Ice Company, ice and coolers for "teas;" Baltimore and Ohio Railroad and United States Express Company, for favors the day of "garden party" at Forest Glen; ladies of the association and *many* other friends, for cake, bread, tea, coffee, chocolate, cream, lemons, candies, etc., and fancy articles, for "teas" and "garden party."

REPORT OF "ALBERTI FUND" COMMITTEE.

Receipts.

November 1, 1888, cash on hand	$1.60
February 5, 1889, six months' interest on note of $1,000	30.00
August 27, 1889, six months' interest on note of $1,000	30.00
Total	61.60

Expenses.

Forty-two bottles bovinine	29.16
Five pounds oatmeal	.30
Five pounds granulated sugar	.50
Six bottles cod-liver oil	2.00
Balance on hand October 31, 1889	29.64
Total	61.60

SARAH A. P. DUNCANSON,
Chairman.

F 29.

HOPE AND HELP MISSION.

WASHINGTON, D. C., *November* 19, 1889.

DEAR SIRS: We, the undersigned, representing the board of trustees of "Hope and Help Mission" of the Woman's Christian Temperance Union, located at No. 305 Missouri avenue, northwest, beg leave to call your attention to the quarterly reports submitted to your body by our treasurer, Mrs. Anna C. McDowell, and to ask your inspection officially of our institution and your co-operation in securing aid from Congress.

The mission has been in successful operation for about three years, and over three hundred destitute, sick, and intemperate women have been cared for at the home during, some for days, others for weeks and

months. We refer you to Major Moore, Sanitary Officer Frank, and Lieutenant Amiss for testimony in regard to details and efficiency in management. The police have sent or brought many of our beneficiaries to us.

We respectfully ask you to recommend $5,000 appropriation from Congress this year, in order to pay the current expenses of an average family of twelve persons, and to enable such industries to be established as shall enable the women and girls to be self-supporting, after the efficient training which is absolutely necessary.

Respectfully submitted.

SARAH D. LA FETRA,
President.
MARY E. CATLIN,
Secretary.
EMILY MOFFETT.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

OFFICE OF MAJOR AND SUPERINTENDENT
METROPOLITAN POLICE OF THE DISTRICT OF COLUMBIA,
November 22, 1889.

Respectfully returned to the honorable Commissioners District of Columbia.

I deem the Hope and Help Mission of the Woman's Christian Temperance Union a very worthy and useful institution.

It is, in my opinion, economically managed, and deserves aid by means of an appropriation.

W. G. MOORE,
Major and Superintendent Metropolitan Police.

WASHINGTON, D. C., *September* 19, 1889.

GENTLEMEN: In submitting the report of the treasurer of the Hope and Help Mission, under the auspices of our society, please let me state that if agreeable to you we would like a hearing on the work of our Home before your body, when the matter comes up for your consideration.

As our Home is comparatively new we feel that something more must be done for the industrial department to make it as helpful as it should be.

With thanks for all courteous consideration in the past,

We remain yours, most respectfully,

SARAH D. LA FETRA,
For Board of Trustees.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

TREASURER'S REPORT.

WASHINGTON, D. C., *September* 19, 1889.

SIRS: The Woman's Christian Temperance Union beg leave to submit the following estimate of the amount required for the conduct and support of the Hope and Help Mission for the fiscal year ending June 30, 1891:

Our estimate for the amount necessary is $2,500, that being the lowest estimate we can reasonably make and enable us to add an industrial department, absolutely necessary.

Our receipts and expenses for the year ending June 30, 1889, were as follows:

Total receipts	$1,000
Total expenses	1,200

Deficiency met by the executive committee of the District Woman's Christian Temperance Union.

All our expenses have been met by individual contributions, until the quarter beginning July 1, 1889, when the first installment of the $1,000 appropriated by Congress was received.

We are anxious to add an industrial department to our Woman's Home, as it would aid us very much in our work of reformation. We find that these women must be taught to be self-supporting, so that when they leave our care they may not be tempted to return to their old way of living. We can not have this department with our present income, but think if we could receive help to the amount asked for, $2,500, we could make this addition, and thereby do a much more permanent and satisfactory work than we are able to do at present.

Respectfully submitted.

ANNA C. MCDOWELL,
Treasurer Woman's Christian Temperance Union,
District of Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

A condensed report of work at the Hope and Help Mission from November 17, 1888, *to the present date.*

Women and girls received into the Home	177
Lodgings given	1,767
Largest number at one time	21
Smallest number at one time	8
Meals furnished	5,026
Callers received, not including hucksters, etc	578
Communications in connection with our work, by letter and postals	258

Have pieced and made seven patch-work quilts and comforters; have on hand the outsides and linings prepared, all of patch-work, for four more; have made twelve comforters and two quilts for outside parties, also an album quilt, for which we received 10 cents for each name written upon it; amount, $5.80.

In addition to the above work, the number of garments that have been made is 647, besides numberless repairings.

Cash received for work done for outside parties, $40.54.

The women have also done all the work of the house of thirteen rooms and three halls.

Have sent fourteen girls to Columbia Hospital; have found service places in good homes for a large proportion of those who have been with us.

MRS. H. K. PERLEY,
Superintendent Hope and Help Mission.

F 30.

MISSION SCHOOL OF COOKERY.

WASHINGTON, D. C., *August* 7, 1889.

SIRS: I have the honor to present the following facts to your favorable consideration in regard to a very deserving institution which is greatly in need of financial assistance, and which I trust it will receive to a moderate amount from the fund in your hand appropriated for such purposes.

The Washington Mission School of Cookery was established about ten years ago, during which time 700 pupils have received free instruction in cooking and 17 have been trained as teachers. Of these latter, 4 are now engaged in teaching cooking in public schools in this city, and 1 in the School of Cookery itself. Last year 124 girls received weekly free lessons in cooking here, of whom 116 were detailed from the colored public schools; and also 17 normal purpils received instruction as teachers of cooking, in both the plain and advanced courses of lessons.

This school is one of the oldest in the country, and was the first to prepare and adopt a regular text-book. It has been for many years a root or center, and persons from all parts of the country wishing to establish schools elsewhere have received information as to its practical working, and have adopted its text-book as a guide.

The method used is simple, practical, and economical, and well adapted to the purpose for which it is designed. The important facts and processes are impressed clearly and concisely on the minds of the pupils, who all take active part in preparing the dishes, and who are frequently questioned about them, the whole time of the lesson being given to practical cookery.

The present term of instruction is for one year only, consisting of thirty progressive lessons, so arranged as to give a good foundation in plain cooking.

The expense of the school during the ten years in which it has accomplished the above tangible results has been borne almost entirely by one lady, who finds herself unequal to the burden of its continued maintenance, and who now appeals to your honorable board to put upon a permanent business footing a work of such undoubted missionary influence. It is not a new experiment whose usefulness may be questioned, but a well tried and already established enterprise, which should not be allowed to fail for want of generous assistance and interest. No one who knows the poor need be told of the value of good cooking as a civilizing element in humble homes, and that an appetizing supper and well-ordered table are strong arguments against the temptations of the dram-shop after the day's work is done, while among the richer classes the importance of its influence on the health and comfort of the household can hardly be overestimated.

The word "mission" is used in a general sense, and the name was given to the school of cookery because it was established for the purpose of awakening an interest in this branch of industrial education, and also of preparing the way for its introduction into the public-school system. The value of the work which it has accomplished in this direction can be seen from the following letters.

It has always been the desire of the managers of this institution to reach the vagrant girls in this city, and they would be glad to take some of these belonging to poor families who are helped by the District

fund. If they could be obliged to come as a condition of receiving assistance, they would soon become interested, and it would help to make them self-supporting and useful members of society.

A year ago the school was placed upon the same footing with other charities, and has asked for and received donations from friends in Washington and other cities. It is, however, greatly in need of more money to carry on the work, and the directors respectfully ask that $——— may be given to them from the fund in your possession appropriated for such purposes.

Trusting that the above will receive from your hands both an early and favorable consideration, we remain,

Very respectfully,

ANNA L. WOODBURY,
President.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

OFFICE OF SUPERINTENDENT OF PUBLIC SCHOOLS,
Franklin Building, Washington, D. C., January 8, 1889.

DEAR MADAM: Your letter of the 5th instant was duly received. The teachers of cookery in our schools last year who received special training for their work in your institution were very successful in the discharge of their duties and gave great satisfaction to the school authorities.

The schools of cookery not only demonstrated their practicability and usefulness, but grew rapidly, and have continued to grow, in public favor. The number of teachers for the current year was increased to six, with a corresponding increase in the number of pupils.

I have watched with pleasure the growth and success of your institution, and I wish it all the prosperity which its merits well deserve.

Cordially, yours,

W. B. POWELL.

Mrs. ANNA L. WOODBURY.

OFFICE OF SUPERINTENDENT OF PUBLIC SCHOOLS.
Sumner School Building, Washington, D. C., January 8, 1889.

DEAR MADAM: For several years you have taught gratuitously several classes of girls under my supervision in the art of plain cooking and in housekeeping to extent dependent upon the kitchen.

The benefits of this instruction have not only been felt in the different homes represented by the pupils in attendance upon it, but, it is believed, in the interest created in it and eagerness for it on the part of others, have added much to the success of the two schools of public provision organized last year.

Believing that, in its general bearing upon health, instruction in the chemistry of food and its proper preparation for the table, and in its education to close economy, it can not fail of great benefit to its recipients, therefore I desire in this way to make known to you my appreciation of your good work.

I also take this opportunity to thank you for your kind services in gratuitously training for their work the two teachers of the schools of public provision, and for the counsel given from time to time, which has contributed so largely to their success.

Yours truly,

G. F. T. COOK,
Superintendent.

Mrs. A. L. WOODBURY.

F 31.

NEWSBOYS' AND CHILDREN'S AID SOCIETY.

GENTLEMEN: I wish to submit the following report for nine months ending September 12, 1889, of the work done by the Newsboys' and Children's Aid Society. The society has been in existence a few years and has been kept up by the strenuous efforts of a few ladies and gentlemen who have made voluntary offerings. The expenses have been about $60 der month, which includes rent for rooms and salary for agent. The rooms have been kept open nightly for the boys to come and read, play, etc., from 7 to 9.30 p. m. and in the daytime for applications for work. Some of those children have been sent adrift by parents and relatives and others have been taken from vicious and immoral people. Honorable Judge Miller, of the police court, knows of us, and often gives over to our care little ones (both colored and white) who come before him as vags, who have been found sleeping under steps, in boxes, and hallways.

We have plans for enlarging our work, for which we need help from Congress.

Employment found, both sexes and colors	59
Lodgings furnished free	159
Meals furnished free	401
Children clothed	21
Transportation furnished	3

We have also found employment for men and women and helped pay rent, etc., for poor families.

Please find with this a report of last year in which will be found the names of some of the ladies and gentlemen who have this work on their hands.

Hoping this will meet with your approbation,

I remain respectfully,

PETER B. SWEENY, *Agent.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

WASHINGTON, *November* 22.

GENTLEMEN: Please find petition of Newsboys' and Children's Aid Society asking for Government aid. We will be greatly obliged if you shall get this most useful and needed charity the appropriation asked.

Respectfully, yours,

HENRY STRONG.

NOVEMBER 15, 1889.

THE NEWSBOYS AND CHILDREN'S AID SOCIETY.

This society, organized and incorporated five years ago, base their appeal for aid from Congress upon the following statements:

(1) During the five years of their existence they have raised between $6,000 and $7,000 by their own, efforts, unaided by either the District or Congress; nearly $2,000 of this sum is invested as a building fund.

This society is a local organization, incorporated for work in the District. Most of the members are taxpayers.

(2) During this period they have found homes and employment for about 500 children, rescuing them from the streets, from miserable homes, and from lives of degradation and crime.

(3) The society supports a home for newsboys and other children. An agent is employed, who visits the police courts to rescue children from the work-house and the chain-gang. At the home, during the past year, 200 children have been lodged, 24 clothed, and over three thousand meals have been furnished. A reading-room is

always open for instruction and amusement and is nightly visited by many boys who are thus saved the temptations of the streets and the pool-rooms.

An industrial class was supported for some time at Howard University, and means are greatly needed for carrying on this work.

In view of these facts, and of the pressing need of better facilities for the work, the society requests the following appropriation from Congress:

Two thousand dollars for the establishment of public baths along the Potomac. In a climate like this, where the thermometer registers among the nineties every year for two or three months, these baths are a public necessity, and in the cities farther north have become established facts.

Three thousand dollars to add to our building fund to aid in the erection of a building suitable for enlarged and rapidly increasing work.

Three thousand dollars for maintenance, so that a larger number of children and youths may be saved from evil and the amount of pauperism and crime in the District thereby be decreased.

By order of executive committee of board of trustees.

HENRY STRONG,
President.
DR. T. S. CHILDS,
Recording Secretary.

F 32.

THE WASHINGTON TRAINING SCHOOL FOR NURSES.

WASHINGTON, D. C., *November* 19, 1889.

The board of trustees of the Washington Training School for Nurses hereby request the honorable Commissioners of the District of Columbia to include in their estimates to Congress an item of at least $1,500 for the maintenance of the Washington Training School for Nurses.

The school has been in uninterrupted operation since its organization and charter in 1877, and has been sustained entirely by voluntary subscriptions. It differs in this aspect from any institution of its kind in the United States, all others being fostered by the municipal governments of the cities in which they are located. The institution is purely an educational one, as will appear by section 3 of its act of incorporation, which is as follows:

3. That the particular business and object of said society is to educate a body of skilled nurses suitable for the needs of hospitals and capable of being intrusted with the care of the sick at their own homes, which education the society proposes to accomplish by lectures, recitations, and oral instruction in the rudiments of such branches of the sciences of medicine and hygiene as may be sufficient for the purpose, and by hospital attendance.

The board of directors and its officers, also the lecture faculty and its officers, have always served without compensation, and they desire none.

The sum asked is to defray the necessary expenses incident to a school of its character.

Very respectfully,

HENRY D. FRY, *President.*
W. G. E. JOHNSON, M. D., *Secretary.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

F 33.

WOMAN'S DISPENSARY.

1619 K STREET, NORTHWEST, *August* 8, 1888.

GENTLEMEN: I have the honor to submit to you the inclosed report, for the year ending June 30, 1889, of the work done at the Woman's Dispensary.

Very respectfully,

JEANNETTE J. SUMNER, M. D.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF WOMAN'S DISPENSARY.

The Woman's Dispensary is located on the northeast corner of Maryland avenue and Four-and-a-half street, southwest. It was incorporated June 18, 1883, for the purpose of providing a place "for the treatment of the medical and surgical diseases of women by physicians who shall be women."

During the past year many of the surgical cases applying for relief have been turned away, owing to a lack of necessary funds for employing a suitable nurse and supplying proper food.

From June 30, 1888, to June 30, 1889:

Visits	2,472
New patients	966
White	97
Colored	869
Prescriptions compounded	2,708
Applications to diseased surfaces	655
Surgical operations	61

Nationality.	No.
American	944
Canada	1
England	2
Germany	3
Ireland	12
Palestine	1
Poland	1
Scotland	1
West Indies	1

Civil state.	No.
Married	507
Single	327
Widows	134
Total	965

Diseases.	No.
Gynæcological:	
Amenorrhœa	9
Cellulitis	3
Cervix, laceration of	12
Cervix and perineum, laceration of	8
Cystitis	17
Cystocele	1
Gynæcological—Continued.	
Dysmenorrhœa	38
Endometritis	3
Endocervicitis	1
Leucorrhœa	25
Menopause	12
Menorrhagia	19
Metrorrhagia	4
Pelvic abscess	1
Perineum, laceration of	1
Pregnancy	29
Pruritus vulvæ	1
Salpingitis	1
Suppressio mensium	14
Urethral caruncle	2
Uterus:	
Anteflexion of	2
Anteversion of	4
Lateral version of	2
Retroversion of	4
Procidentia of	2
Prolapse of	4
Infantile	1
Tumor of	7
Vesico vaginal fistula	1
Total	227
Medical:	
Alcoholism	1
Ascites	1
Asthma	11
Bronchitis	45

Diseases.	No.
Medical—Continued.	
Cephalalgia	13
Constipation	68
Coryza	8
Diarrhea	16
Dysentery	3
Dyspepsia	47
Enteritis	7
Hæmophilia	1
Hæmaturia	1
Hysteria	1
Hæmoptysis	1
Indigestion	49
Laryngitis	5
Liver, congestion of	23
Malaria	65
Malingerer	1
Marasmus	1
Neuralgia	20
Neurasthenia	13
Paralysis	1
Pharyngitis	5
Phthisis	9
Purpura hemorrhagica	1
Rheumatism	72
Stomatis	1
Sciatica	3
Tonsillitis	17
Ulcerated throat	1
Valvular disease of heart	5
Total	534
Surgical:	
Abscess	5
Acne	6
Ankyloglossia	2
Axillary tumor	1
Cataract	1
Conjunctivitis	6
Dentition	1

Diseases.	No.
Surgical—Continued.	
Eczema	14
Epistaxis	2
Erysipelas	1
Fistula in ano	1
Furuncle	2
Gonorrhœa	4
Hemorrhoids	13
Hernia:	
Femoral	1
Inguinal	2
Herpes zoster	2
Injury	13
Keloid	1
Leg ulcer	9
Mastitis	1
Nasal catarrh	15
Odontalgia	2
Otitis	1
Paronychia	2
Rachitis	1
Rectum:	
Abscess of	1
Prolapse of	2
Scald	1
Scrofula	2
Spasms	1
Sprain	2
Spinal irritation	1
Sting of insect	1
Strain	1
Synovitis	1
Syphilis	28
Torticollis	1
Tumor of neck	1
Urticaria	1
Varicose veins	2
Wound	2
Total	157
Unclassified	48

JEANNETTE J. SUMNER, M. D.,
Attending Physician.

Report of the treasurer of the Woman's Dispensary for the year ending June 30, 1889.

By cash on hand June 30, 1888	$273.06
By cash from District Commissioners	300.00
By cash from all other sources	345.00
Total	918.29
To cash for rent	300.00
To cash for medicines, fuel, etc	360.06
To cash balance on hand	258.23
Total	918.29
Outstanding liabilities	464.25

Respectfully,

M. MUNCASTER, M. D.,
Treasurer Woman's Dispensary.

F 34.

THE WOMEN'S UNION CHRISTIAN ASSOCIATION.

The Women's Union Christian Association respectfully submits a brief report of its second year's work, for your careful consideration.

The association was organized April 20, 1886, for the purpose of seeking out homeless and destitute girls, with the view of bringing them under religious and industrial influences.

The organization has grown in strength and influence during the past year. More than forty girls have come under the control of the home, and have been taught the art of sewing and various domestic work. A mother and seven children were supported in the home during the winter; also two half-grown girls were maintained during the year, and good homes secured for them. A flourishing band of hope has been sustained.

The association extends to the friends and patrons its sincere thanks for their donations and sympathy, and solicits their continued interest and support. We have secured a most desirable building, consisting of sixteen rooms, for the work during the ensuing year. It is situated on Erie street, Meridian Hill, near Sixteenth street extended. For location and health it can not be excelled, and the view is one of the finest, overlooking the entire northwestern part of the city. It is in every way desirable for the work. We now have enlarged facilities, and shall need increased funds to keep pace with the growing demands of our work. The outlook was never brighter.

We earnestly appeal to our friends to unite heart and hand, prayers and gifts, to maintain this work in the name of the Master who has said, "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me."

In addition to the good work already begun, we purpose to open a reading-room, library, and a mission Sunday-school.

Any donations of money, clothing, furniture, etc., may be sent to the following-named persons:

Mrs. E. S. Moore, Lincoln Memorial Church, corner Eleventh and R streets.

Mrs. Carter Stewart, 1720 Seventeenth street, northwest.

Mrs. Caroline Taylor, 1152 Sixteenth street, northwest.

Mrs. E. A. Jackson, 1739 K street, northwest.

Mrs. E. A. Duffield, Sixteenth street extended, Meridian Hill.

An opening reception will be held at the home Monday evening, October 15, 1888, to which the friends are cordially invited.

Mrs. A. F. WARING, *President.*
Mrs. A. J. ROBERTS, *Treasurer.*
Mrs. E. A. DUFFIELD, *Secretary.*

G.

REPORT OF THE OPERATIONS OF ENGINEER DEPARTMENT.

A.—REPORT OF CAPT. THOMAS W. SYMONS, CORPS OF ENGINEERS, U. S. ARMY, ASSISTANT TO THE ENGINEER COMMISSIONER OF THE DISTRICT OF COLUMBIA.

WASHINGTON, D. C., *September* 15, 1889.

MAJOR: I have the honor to submit the following annual report of the operations of the Engineer Department, under my supervision, for the fiscal year 1888–'89.

STREET IMPROVEMENTS.

Appropriation distributed as follows:

Schedule.	Amount.	Sectional schedules.	Including general schedule.
		Per cent.	*Per cent.*
General	$144,600		
Georgetown	38,600	8.3	6.4
Northwest	191,400	40.7	36.3
Southwest	52,800	11.2	16.9
Southeast*	57,900	12.3	18.7
Northeast	129,700	27.5	21.7
Total	615,000	100.0	100.0

* Includes $3,500 for replacement of wood pavements.

The character and extent of the street pavements, on July 1, 1889, are shown in the following table:

SUMMARY.

Carriageway.	Length.	Square yards.	Miles.
	Feet.		
Sheet asphalt	189,573	830,259	35.9
Coal-tar	201,640	881,939	38.2
Asphalt block	37,790	166,137	7.1
Granite	122,887	570,665	23.2
Wood	3,168	11,403	0.6
Cobble and blue rock	62,586	479,988	12.0
Macadam	32,105	179,041	6.0
Gravel	177,113	653,081	33.5
	826,862	3,772,513	156.5
Unimproved	413,307	1,423,775	78.2
Total	1,240,109	5,196,288	234.7
SUBURBAN.			
Asphalt	2,124	966	0.4
Asphalt block	346	7,672	0.065
Granite	2,354	10,714	0.404
Total	4,828	19,352	0.869

This table shows that we have (July 1, 1889) in the District of Columbia smooth pavements (asphalt, coal-tar, and asphalt block) to the extent of 81.665 miles, or 431,473 feet, or 1,886,973 square yards.

It also shows that the average width of the smooth roadways of Washington are 39⅓ feet.

The only other American city rivaling Washington in the extent of its smooth pavements is Buffalo, where there are about 75 miles laid.

The following gives the amount of smooth pavements in other American cities named, the information being obtained by correspondence with the proper authorities.

	Square yards.
Albany	7,461
Syracuse	10,000
Philadelphia	166,000
St. Paul	82,500
Providence	10,000
Kansas City	83,060
St. Louis	83,424
Detroit	50,042
Rochester	149,206
Cincinnati	140,000
New York City	37,900

The pavements laid during the past year were (1) granite block, (2) asphalt on bituminous base, (3) asphalt on hydraulic base, (4) coal-tar distillate, and (5) asphalt block.

GRANITE BLOCK.

This pavement is laid on streets where a very heavy traffic exists or may reasonably be expected to exist.

It has also been customary to lay it on streets with a grade steeper than about 5 per cent., because of doubts as to the sheet pavements standing on the slopes and because of the belief that the granite blocks furnish better footing for animals. From experience I am convinced of the fallacy of both of these reasons. An asphalt pavement will stand perfectly well on a slope of 7 or 8 per cent., and perhaps steeper, and for horses shod, as nearly all the horses of this city are, with flat shoes, the asphalt pavement on a slope affords a better foothold, both going up and down hill, than the granite blocks, except when covered with a thin film of ice.

ASPHALT PAVEMENT ON BITUMINOUS BASE.

Nearly all the sheet pavement laid during the past fiscal year was of this character, and so thoroughly does it commend itself that it is the only sheet pavement which will be laid during the present fiscal year, with the exception of that on Fifteenth street opposite the Treasury.

ASPHALT PAVEMENT ON HYDRAULIC BASE.

A small amount of pavement was laid as an experiment last year with a base of 4 inches of hydraulic concrete and 1½ inches of bituminous binder and 1½ inches asphalt wearing surface coat. This is, in every respect, a most excellent pavement, and more of it would be laid only the contractors refuse to lay it for less than $2.10 per square yard, and as the law prohibits the payment of more than $2, its use had to be discontinued.

COAL-TAR DISTILLATE.

Only two or three squares of this pavement, ordinarily called vulcanite, but more correctly called simply coal-tar pavement, were laid

during the past year, and none has been contracted for the present fiscal year. It is not considered as satisfactory as the asphalt pavement.

ASPHALT BLOCK PAVEMENT.

Quite a large amount of this pavement was laid during the year, and it has given very good satisfaction. The blocks are made of such consistency that when subjected to the heat of the summer sun and continued traffic they cement together and become almost indistinguishable from a sheet asphalt pavement.

The specifications for street pavements and material are appended hereto.

During the present season the experiment has been tried of laying a sheet pavement on old rubble or cobble as a base. The specifications for the work are appended. They are, in brief, to fill up the pavement to an even surface with bituminous binder, and upon this to lay the regular asphalt wearing surface coat.

Two squares of the pavement have been laid on E street, between Thirteenth and Fifteenth, and as far as determined is in every respect satisfactory.

The utilization of the old rubble and cobble pavements for the base of asphalt pavements will result in large saving to the District. There are at least 400,000 square yards of pavement which can be treated in this way, and the saving will be fully 50 cents per yard.

GRADING AND REGULATING.

The grading and regulating of streets during the year was construed the same as formerly, *i. e.*, the laying of a brick sidewalk, curb, cobble gutter, and gravel roadway, and the work was done accordingly.

For the work at present in hand a different construction was placed upon the words "grading and regulating," and it is now made to cover a brick sidewalk, cobble gutter, and macadam roadway. The reason for the change is as follows: It has been found that a macadam roadway pavement, if at the proper elevation and having suitable cross-section, makes an excellent base for an asphalt pavement by cleaning it of dirt and rubbish and laying on it first a coat of bituminous binder and then the asphalt wearing coat. It was therefore desired, instead of laying gravel roadways, which are never satisfactory, to lay a macadam roadway at such an elevation and with such cross-section that when the street comes to be paved it shall be a proper base for the asphalt surface. To meet the extra expense of the macadam over gravel it was determined to dispense with curb, leaving this to be supplied and set whenever the street shall be paved. The gutter is so laid as to take the place of curb, in as good a manner as possible. Where curb is already in the street, or old curb is obtainable, it is set; but no new curb is obtained for graded and regulated streets, except in special cases.

The new method will furnish better immediate streets than the old, will hasten the time when the street will be finally improved, and will result in the saving to the District of large amounts of money.

Probably in the next ten years, if this method of improvements is systematically carried out, the District will save at least $500,000 and two or three times as much during the succeeding ten years.

The nature, distribution, and cost of the various improvements made from the appropriation for street improvements during the year are shown in the following table:

GENERAL SCHEDULE.

Date.	No. of Contract.	Contractors.	Locality.	Square yards.	Price sq. yard.	Contract work.	Material.	Total cost.	Character of improvement, etc.
1888.									
Aug. 25	973	Andrew Gleeson	Seventh street, northwest, from Q to Boundary.	3,406.08	$0.84	$4,327.84	$4,975.68	$9,303.52	Granite block pavement.
Aug. 24	964	T. H. Lyons	Four-and-a-half street, southwest, from H to Arsenal.	14,563.17	{.74½ .94½}	16,343.88	32,079.22	48,423.10	Do.
Aug. 25	973	Andrew Gleeson	Brightwood avenue from Grant avenue to Princeton.	6,295.25	.91	10,539.09	16,141.44	26,683.50	Granite block pavement.
Aug. 30	978	W. H. Mohler	Eleventh street, southeast, from Pennsylvania avenue to Bridge.	15,450.77	.91	21,915.68	31,808.19	53,723.87	Granite block pavement.
Sept. 11	985	Barber Asphalt Paving Company.	South and west of Treasury	5,600.75	2.00	16,952.73	164.75	17,117.48	Asphalt pavement.
Sept. 12	986	Springman & Bro.				400.00		400.00	Removing gates, etc.
				45,316.00		70,079.13	85,169.28	155,951.47	

GEORGETOWN SCHEDULE.

Sept. 5	983	John Dugan	Prospect street from Thirty-third to Thirty-sixth.	3,141.64	.07½	4,916.15	893.00	5,809.15	Grade and regulate.
Sept. 11	985	Barber Asphalt Paving Company.	Q street from Twenty-eighth to Thirtieth	2,000.00	2.00	6,111.10	496.57	6,607.67	Asphalt pavement.
Sept. 11	985	do	Thirtieth street from P to Q	1,282.10	2.00	3,422.37	92.23	3,514.60	Do.
Sept. 11	985	do	O street from Thirty-fifth to College Gate.	2,397.44	2.00	6,525.41	1,733.77	8,259.18	Coal-tar distillate pavement.
Sept. 22	996	John Dugan	Thirty-third street from P to R			2,190.99	3,878.98	6,069.97	Grade and regulate.
Sept. 22	996	do	Thirty-fourth street from M to N			1,868.62	238.13	2,106.75	Do.
				8,821.18		25,034.64	7,332.68	32,367.32	

NORTHWEST SCHEDULE.

Aug. 24	966	T. H. Lyons	F street, northwest, from Twenty-third to Twenty-sixth.			1,260.00		1,260.00	Grade and regulate. (Incomplete.)
Aug. 24	968	M. F. Talty	N street, northwest, from Third to North Capitol.	4,111.20	.10	2,348.96	1,040.28	3,389.24	Grade and regulate.
Aug. 25	970	H. L. Cranford	Twelfth street, northwest, from R to S	1,798.11	2.00	7,955.54	221.32	8,176.86	Coal-tar distillate pavement.
Aug. 25	970	do	R street, northwest, from Seventh to Ninth	1,601.82	2.00	3,972.69	89.30	4,061.99	Do.

Aug. 25	970	.....do	S street, northwest, from Seventh to Eleventh.	5,058.40	2.00	12,605.69	1,921.33	14,526.02	Do.
Aug. 25	970	.....do	O street, northwest, from Twenty-first to Twenty-second.	2,398.13	2.00	5,919.83	1,045.73	6,965.56	Asphalt pavement.
Aug. 25	970	..... do	Q street, northwest, from Fifth to New Jersey avenue.	2,030.67	2.00	4,856.34	13.39	4,869.73	Coal-tar distillate pavement.
Aug. 25	970	.....do	Q street, northwest, from Rhode Island avenue to Vermont avenue.	2,453.44	2.00	6,004.24	72.90	6,077.14	Do.
Aug. 25	970	.....do	Q street, northwest, from Seventeenth to Nineteenth.	4,904.03	2.00	10,743.96	.....	10,743.96	Asphalt pavement.
Aug. 25	970	.....do	Seventeenth street, northwest, from Q to R	1,874.24	2.00	5,171.47	982.58	6,154.05	Coal-tar distillate pavement.
Aug. 25	970	.....do	New Hampshire avenue, northwest, from Q to R.	4,163.68	2.00	9,822.77	1,213.18	11,035.95	Asphalt pavement.
Aug. 25	970	.....do	Corcoran street, northwest, from Fifteenth to New Hampshire avenue.	4,851.49	2.00	13,615.32	3,836.83	17,452.15	Do.
Sept. 11	985	Barber Asphalt Paving Company.	New York avenue, northwest, from Seventh to New Jersey avenue.	9,229.11	2.00	24,064.33	1,658.95	25,723.28	Do.
Sept. 11	985	.....do	Rhode Island avenue, northwest, from Fifth to New Jersey avenue.	2,312.71	2.00	5,459.19	92.88	5,552.07	Do.
Sept. 11	985	.....do	Boundary street, northwest, from Seventh to New Jersey avenue.	7,207.70	2.00	17,404.16	727.63	18,131.79	Do.
Sept. 11	985	.....do	Twenty-second street, northwest, from O to P.	1,585.70	2.00	3,928.11	933.56	4,861.67	Do.
Sept. 11	985	.....do	Eighth street, northwest, from S to Boundary.	3,623.84	2.00	8,892.66	44.65	8,937.31	Coal-tar distillate pavement.
1889.									
Feb. 21	1042	H. L. Cranford	Thirteenth street, northwest, at B	775.21	2.00	1,705.58	.....	1,705.58	Asphalt pavement.
Feb. 26	1044	Barber Asphalt Paving Company	Fifth street, northwest, from O to Q	3,122.98	2.00	7,630.24	133.95	7,764.19	Do.
Apr. 15	1053	Cranford Paving Company	Fifth street, northwest, from Q to Boundary	4,436.13	2.00	11,336.52	317.75	11,654.27	Do.
				67,538.59		164,697.60	14,346.21	179,043.81	

SOUTHWEST SCHEDULE.

1888.									
Aug. 8	953	P. Maloney	C street, from Twelfth to Fourteenth	3,839.57	2.00	9,097.51	17.86	9,115.37	Asphalt block pavement.
Aug. 23	963	P. R. Pullman	G street, from Third to South Capitol	3,610.50	.12	3,636.59	1,654.34	5,290.63	Grade and regulate.
Aug. 25	970	H. L. Cranford	G street, from Third to Four-and-a-half	2,475.65	2.00	5,238.81	20.62	5,259.13	Coal-tar distillate pavement.
Aug. 27	976	William Buckley	L street, from First to Four-and-a-half	3,971.97	.13	3,102.21	849.69	3,951.90	Grade and regulate.
Aug. 27	976	.....do	I street, from First to Water	8,753.70	.13	6,250.02	5,831.00	12,081.02	Do.
Aug. 27	976	.....do	Canal street, from B to First	5,753.78	.13	2,188.61	1,074.79	3,263.40	Do.
				28,405.17	.....	29,513.45	9,448.30	3,961.45	

SOUTHEAST SCHEDULE.

Date.	No. of contract.	Contractors.	Locality.	Square yards.	Price sq. yard.	Contract work.	Material.	Total cost.	Character of improvement, etc.
1888.									
Aug. 23	953	P. Maloney	Seventh street, from D to Virginia avenue.	8,394.28	$2.00	$22,724.72	$4,587.54	$27,312.26	Asphalt block pavement.
Aug. 23	953	do	Sixth street, from E to Virginia avenue	4,774.52	2.00	11,997.59	152.92	12,150.51	Do.
Aug. 30	979	J. S. Ellis	H street, from First to Second	1,847.80	.17	1,087.79	193.48	1,281.27	Grade and regulate.
Aug. 11	985	Barber Asphalt Paving Co.	Pennsylvania avenue, from Eighth to Eleventh.	5,400.46	2.00	11,876.05	14.29	11,890.34	Asphalt pavement.
				20,417.08	.....	47,686.15	4,948.23	52,634.38	

NORTHEAST SCHEDULE.

Aug. 23	950	P. Maloney	Massachusetts avenue, from Sixth to Eighth.	6,749.41	2.00	16,279.11	165.25	16,444.36	Asphalt block pavement.
Aug. 23	950	do	Maryland avenue, from Sixth to Eleventh	14,950.90	2.00	35,689.31	3,944.65	39,633.96	Do.
Aug. 23	950	do	Eighth street, from East Capitol to Massachusetts avenue.	2,969.41	2.00	7,302.36	39.29	7,341.65	Do.
Aug. 23	953	do	C street, from Sixth to Eighth	3,886.09	2.00	9,886.49	8.93	9,895.42	Do.
Aug. 23	953	do	Seventh street, from B to D	3,315.49	2.00	9,053.35	2,090.79	11,144.14	Do.
Aug. 25	970	R. L. Cranford	F street, from North Capitol to Third	8,339.19	2.00	19,304.93	491.96	19,796.89	Coal-tar distillate pavement.
Aug. 25	973	Andrew Gleeson	Maryland Avenue at Fifteenth	2,527.01	.95	3,328.00	5,250.78	8,578.78	Granite block pavement.
Aug. 25	974	do	G street, from Second to Sixth	4,248.68	.10½	2,966.21	721.70	3,687.91	Grade and regulate.
Aug. 25	974	do	B street from Eleventh to Fourteenth	5,110.05	.13	3,164.42	2,316.82	5,481.24	Do.
Aug. 25	974	do	C street, from Eighth to Eleventh	2,807.52	.16	1,352.33	.....	1,352.33	Do.
Aug. 25	974	do	Third street, from E to H	3,811.39	.09	2,694.53	1,249.44	3,943.97	Do.
				58,815.14	.....	111,021.04	16,279.61	127,300.65	

REPLACEMENT OF WOOD SCHEDULE.

Aug. 18	950	P. Maloney	D street, south side, from Seventh to Ninth.	1,205.12	2.00	2,906.59	.....	2,906.59	Asphalt block pavement.

APPROPRIATIONS FOR 1889–'90.

From the list of streets approved by Congress the Commissioners selected the following for improvement in 1889–'90, and the same are under contract.

GENERAL SCHEDULE.

Street.	From—	To—	Character of improvement.
C southeast and southwest	First	New Jersey avenue	Asphalt pavement.
Maryland avenue northeast	Eleventh	Thirteenth	Asphalt blocks.
Pennsylvania avenue southeast	do	Bridge	Grade and regulate.
North Capitol	I	K	Asphalt pavement.
Thirty-fifth, Georgetown	Q	U	Do.
Seventeenth	Pennsylvania avenue.	New York avenue	Do.
North Carolina avenue	Third	Sixth	Granite blocks.
Four-and-a-half	Missouri avenue	Maryland avenue	Asphalt pavement.
New Hampshire avenue	R	T	Do.
Delaware avenue southwest	B	C	Grade and regulate.
Fifteenth	New York avenue	Pennsylvania avenue.	Asphalt pavement.
New Hampshire avenue*	T	V	Do.
New York avenue*	New Jersey avenue	First street west	Do.

GEORGETOWN SCHEDULE.

Prospect	Thirty-third	Thirty-fifth	Asphalt pavement.
Thirty-fourth	M	P	Do.
Twenty-eighth	P	Q	Do.
Twenty-ninth	P	Q	Do.
Thirty-fifth	Prospect	N	Do.
Thirty-third	M	N	Do.
Do	P	Thirty-second	Do.
Prospect*	High	Thirty-third	Do.
Thirty-fourth*	P	S	Grade and regulate.

* Delayed until toward the close of the fiscal year, when, if money is available, they will be done.

NORTHWEST SCHEDULE.

Twenty-fifth	Pennsylvania avenue.	M	Asphalt pavement.
Twenty-fifth	New Hampshire ave.	K	Grade and regulate.
R	Twenty-fifth	Twenty-sixth	Do.
Twenty-second	M	O	Asphalt pavement.
Four and-a-half	Pennsylvania avenue	D	Granite blocks.
L	Twenty-sixth	Twenty-seventh	Asphalt pavement.
Q	Fifth	Sixth	Do.
Pierce	New Jersey avenue	North Capitol	Do.
Sampson	Fourteenth	Fifteenth	Do.
Madison	M	N	Do.
Marion	P	R	Do.
Washington	Fourth	Fifth	Do.
Johnson	R	S	Do.
Kingman	P	Q	Do.
French	Ninth	Tenth	Do.
Ridge	Fourth	Fifth	Do.
Q	New Jersey avenue	Third	Do.
L	New Jersey avenue	North Capitol	Do.
Twenty-first	R	Boundary	Do.
Twelfth	S	V	Do.
Seventeenth	R	T	Do.
E	Pennsylvania avenue	Fifteenth	Do.
S	Sixteenth	New Hampshire ave.	Do.
M	New Jersey avenue	First	Do.
N	Fifth	New Jersey avenue	Do.
First	I	K	Do.
R*	Fourth	Seventh	Do.
R*	Sixteenth	New Hampshire ave.	Do.
Twelfth*	V	Boundary	Do.
Fourth*	New Jersey avenue	M	Do.
Twenty-fifth*	K	Pennsylvania avenue.	Do.

SOUTHWEST SCHEDULE.

H	*First	Third	Asphalt pavement.
D	South Capitol	First	Do.
L	Four-and-a-half	Water	Grade and regulate.
K	First	Eighth	Do.
Second	F	Delaware avenue	Do.
Second	Maryland avenue	F	Asphalt pavement.
Ninth	B	C	Do.
Canal*	C	E	Granite blocks.

SOUTHEAST SCHEDULE.

C	Sixth	Seventh	Granite blocks.
D	Third	Sixth	Do.
Ninth	East Capitol	I	Grade and regulate.
C	Seventh	Eleventh	Do.
D (north side)	Pennsylvania avenue	Sixth	Granite blocks, curb, gutter, and sidewalk.
South side Lincoln square			
Fourth	Pennsylvania avenue	North Carolina avenue	Granite blocks.
Third	Virginia avenue	K	Do.
Virginia avenue	Second	Third	Grade and regulate.
D	First	Third	Granite blocks.
First	C	D	Do.
Fifth	Crossing square		Do.
I*	Third	Eighth	Grade and regulate.
C (north side)*	Fourth	Sixth	Granite blocks.

NORTHEAST SCHEDULE.

Third	C	F	Asphalt pavement.
H (south side)	First	Boundary	Do.
Myrtle	North Capitol	First	Do.
K	do	do	Do.
I	do	do	Do.
G	do	do	Do.
A	Seventh	Ninth	Granite blocks.
Fifth	C	D	Do.
D	Massachusetts avenue	Maryland avenue	Grade and regulate.
I	Sixth	Seventh	Do.
Ninth*	Massachusetts avenue	Maryland avenue	Do.
Eighth*	Maryland avenue	B	Granite blocks.

* Delayed until toward the close of the fiscal year, when, if money is available, they will be done.

SPECIAL SCHEDULE.

Twentieth	R	S	Asphalt pavement.
S	Twentieth	Connecticut avenue	Do.

SCHEDULE FOR 1890-'91.

The determination of the proper basis for estimates of appropriations for street improvements in the different sections of the city is an exceedingly complicated and unsatisfactory operation, as there are such a multiplicity of things to be considered in making the apportionment, and the fact that so many really needed improvements must be left out.

I give herewith a table showing absolutely and relatively in the different sections of the city: (1) Taxable valuations; (2) areas; (3) population, and (4) streets yet to be improved (which include all streets not provided with concrete or granite-block pavements). The table is based on the last assessment and the streets as they existed at

beginning of the fiscal year, and the population as shown at the last police census.

Section.	Taxable valuation.		Area.		Population.		Streets to be improved.		Mean average.
		Pr. ct.	Acres.	Pr. ct.		Pr. ct.	Sq. yards.	Pr. ct.	Pr. ct.
Georgetown	$5,307,112	4.3	590.95	9.2	17,233	7.8	155,724	5.7	6.8
Northwest	96,768,801	77.9	2,720.79	41.5	112,360	51.5	710,934	26.6	49.4
Southwest	7,377,115	5.9	957.42	14.6	26,263	12.0	354,077	13.1	11.4
Southeast	6,930,908	5.6	1,247.40	19.0	32,347	14.9	720,400	27.0	16.6
Northeast	7,746,707	6.3	1,033.56	15.7	29,954	13.8	748,253	27.6	15.8
Total	124,130,643	100.0	6,550.12	100.0	218,157	100.0	2,689,388	100.0	100.0

Taxable valuation in county, $12,613,812.

As a further consideration leading to a just apportionment, may be mentioned the will of Congress as exhibited in the appropriations of the past few years.

There are other considerations of a more or less indeterminate character which have a bearing on a proper determination, among which may be mentioned the amounts of money spent from the general revenues for repairs; the fact that unimproved property has paid taxes for years for the benefit of that property which has been improved; the relative growth in taxable valuations and population of the different sections, etc.

The correct basis of apportionment must always depend largely on the judgment of those in authority, who have opportunities to study the subject, and it seems proper to give great weight to the apportionment as exhibited in the appropriation bills.

I give herewith the appropriation items of the last three years with the percentages shown:

Section.	1887–'88.	Per ct.	1888–'89.	Omitting general schedule.	Including general schedule as estimated.	Including general schedule as actually expended.	1889–'90.	Omitting general schedule.	Including general schedule as allotted.
				Per ct.	Per ct.	Per ct.		Per ct.	Per ct.
General schedule			$144,600				$185,165		
Georgetown	$45,000	12.9	38,600	8.3	6.4	6.4	57,350	9.70	10.30
Northwest	140,000	40.0	191,400	40.7	36.2	36.3	234,210	39.90	40.20
Southwest	50,000	14.3	52,800	11.2	15.6	16.9	89,900	15.35	13.62
Southeast	65,000	18.5	57,900	12.3	20.4	18.7	89,900	15.35	15.38
Northeast	50,000	14.3	129,700	27.5	21.4	21.7	115,475	19.70	20.50

I also give herewith a table showing, first, the total areas of streets in each section of the city; second, the areas yet to be improved in each section, with the percentages that these bear to the whole; third, the areas finally improved, with the percentages that they bear to the whole.

This is a very instructive table, showing as it does that nearly one-half of the streets of the city (47.28 per cent.) are finally improved; that in the northwest about two-thirds of all streets are finally improved; that in Georgetown and the southwest nearly one-half are finally im.

proved, while in the southeast and northeast only about one-fifth of the streets are finally improved.

Section.	Total area of streets.	Area yet to be improved.		Area finally improved.	
	Square yards.	*Square yards.*	*Per cent.*	*Square yards.*	*Per cent.*
Georgetown	283,359	155,724	54.96	127,635	45.04
Northwest	2,370,133	710,934	29.96	1,659,199	70.04
Southwest	632,650	354,077	55.97	278,573	44.03
Southeast	903,015	720,400	79.78	182,615	20.22
Northeast	911,594	748,253	82.09	163,341	17.91
Entire city	5,100,751	2,689,388	52.72	2,411,363	47.28

A careful balancing of the foregoing percentages and considerations, and a personal knowledge of the streets gained by driving constantly over the various sections, convinces me that an arbitrary apportionment which will be justice to all would be about as follows:

	Per cent.
Georgetown	10
Northwest	38
Southwest	12
Southeast	20
Northeast	20
	100

I recommend that this be adopted for the present year's estimates.

There are in the city and in Georgetown streets which are in urgent need of improvement, the aggregate cost of which is over $2,000,000.

I have prepared a list of the streets in each section which, from personal inspection, I would recommend be improved at the earliest possible date.

Of this amount I have put into the general schedule streets aggregating $650,000, which streets are those which are great thoroughfares and of general public importance, including all the avenues, streets dividing one section from another and the city from the county, the street in front of the Baltimore and Potomac Railroad depot, streets about the public squares, etc.

PERMIT WORK.

Appropriation, 1888–'89	$90,000.00
Expended	114,607.78
Of this amount there was expended under the street department the sum of	82,516.13
Repayments during the year	30,641.27
Appropriation, 1889–'90	125,000.00
Estimate for 1890–'91	300,000.00

According to law, repayments are available for other work done during the year.

In the street department the following is the summary of expenditures for labor and material:

Regular permit work:	
Labor	$7,306.45
Material	14,538.36
	21,844.81
Compulsory permit work:	
Labor	15,396.77
Material	45,274.55
	60,671.32

The following exhibits a summary of the work done. The details of each piece of work are on file in the office of the superintendent of streets:

UNDER THE PERMIT SYSTEM.

Labor	$7,306.45
Material	14,538,36
Total	21,844.81

Summarized as follows:

Brick pavement laid	square yards..	7,651
Granite block pavement laid	do....	24
Asphalt block pavement laid	do....	2,132
Asphalt tile pavement laid	do....	3,741
Cobble and rubble laid	do....	1,382
Curb set	lineal feet..	4,341
Flag laid	do....	1,758
Grading	cubic yards..	8,891

UNDER THE COMPULSORY PERMIT SYSTEM.

Labor	$15,396.77
Material	45,274.55
Total	60,671.32

Summarized as follows:

Brick pavement laid	square yards..	3,484
Granite block laid	do....	267
Asphalt block laid	do....	21,589
Asphalt tile laid	do....	2,091
Cobble and rubble laid	do....	3,062
Curb set	lineal feet..	2,333
Flag laid	do....	3,931
Grading	cubic yards..	12,326

The amount of appropriation for 1889–'90 is $125,000, and its expenditure is coupled with the condition that one-half of the cost of all work shall be charged to abutting property, whether the work is done at the request of property-owners or by order of the Commissioners in consideration of the public health, safety, or comfort. The law also prescribes for the assessment and collection of amounts due under the latter, known as the compulsory permit system. All the money appropriated will be expended, and much more could be expended with great advantage to the city.

This is the only fund by which the improvements of alleys can be accomplished, and by it the Commissioners are enabled to produce excellent results from a sanitary point of view. There is a large part of the population of Washington living in alleys, some of which are improved, but many are deficient in the improvements which tend to cleanliness and health. Many alleys are without sewerage or paving, and filthy slops are thrown out to soak into the ground and drain off as best they may. These festering nuisances are not visible to the public in driving about the city, but they are visible to the inspectors of of this department and of the health department and are the constant subject of report and complaint.

The good health and good name of the city demands that the alleys should be kept in as good sanitary condition as the streets, and the only way to accomplish this is to provide these alleys with the necessary modern adjuncts to civilization—water supply, sewers, and pavements. If ever a fatal epidemic strikes the city it will be fostered and multiplied in consequence of these hidden, loathsome alleys. To guard against anything of the kind I would respectfully and earnestly recom-

mend that very liberal appropriations be made for their improvement.

It is from this fund also that improved sidewalks are provided. The need of these is too well known, and has been too frequently discussed to require any further argument in favor of liberal appropriations therefor.

There is one class of cases in which improved sidewalks are needed which is not covered by the permit law, and this is where the General Government or District own the abutting property. For the purpose of laying improved sidewalks about the parks and in front of public buildings, and not provided for under the permit system, I have asked for a special appropriation of $25,000.

CURRENT REPAIRS TO STREETS, AVENUES, AND ALLEYS.

Appropriation 1888-'89	$35,000.00
Expended	34,972.60
Appropriation 1889-'90	40,000.00
Estimate for 1890-'91	75,000.00

There is an immense amount of work devolving on the street department in the way of keeping the streets, alleys, and sidewalks of the city in proper and satisfactory condition. This is the only appropriation available for repairs of everything connected with the city streets, sidewalks, and alleys, except the sheet pavements.

With the money hitherto available it has been found impossible to do everything in a satisfactory manner.

The following exhibits a summary of the work done during the year:

Brick pavements laid	square yards..	6,709
Granite block laid	do....	757
Asphalt block	do....	549
Asphalt tile	do....	101
Cobble and rubble	do....	26,709
Curb set	linear feet..	6,113
Flag laid	do....	17,833
Grading	cubic yards..	4,093
Broken stone and gravel	do....	7,722
Resurfacing asphalt pavements	square yards..	39.90

SIDEWALKS.

Under the regular appropriation for street improvements, the only sidewalks laid were of brick.

	Square yards.
Of new brick sidewalks, there were laid	58,213
Of old brick sidewalks relaid, there were	34,706

Other walks were laid out of the appropriation for "current repairs," as follows:

	Square yards.
Brick sidewalks	6,709
Asphalt tile	101

Under the "regular permit system:"

	Square yards.
Asphalt tile	3,741
Brick sidewalk	7,651

Under the "compulsory permit system:"

	Square yards.
Brick sidewalks	3,484
Asphalt tile	2,091

In county, from repairs to county roads:

Old plank sidewalk	1,798
New plank sidewalks	600

In county, from regular appropriations for street improvements, work done by days' labor:

	Square yards.
Brick sidewalks	4,880
New plank	1,700

The roadway pavements of Washington are beyond question unsurpassed in any city of the world; but the same can not be said of the sidewalks.

Bricks properly laid on a bed of porous sand and gravel form a fairly good sidewalk. This, costing, as it does, less than half of any other equally satisfactory sidewalk yet devised, is suitable for newly-improved streets, and I see no present necessity or probability of changing it for any other. But brick sidewalks are not suitable for streets in the heart of the city which are thoroughfares or thickly or handsomely built up. For these streets some other sidewalk or sidewalks should be devised and adopted, and whenever the existing brick sidewalks shall become worn out or need replacing from any cause it should be obligatory to replace with one better and more satisfactory. It will be well, if a thoroughly satisfactory foot-pavement can be obtained at reasonable cost, to gradually remove all the old brick pavements in the thickly and finely built up portions of the city and substitute new ones.

A great deal of thought has been bestowed upon the subject of improving the sidewalks of the city, which in many instances are dilapidated, unsightly, uncomfortable to walk over and dangerous.

Under the present appropriation bill for permit work a considerable portion of the money has been reserved to lay improved sidewalks, and orders have been issued to lay them where needed on Seventh, Ninth, and F streets, and Louisiana avenue, within certain limits.

Besides the asphalt tile and asphalt block sidewalks, which have been laid for some years, a new sidewalk has been devised, consisting of artificial stone blocks 18 inches square laid on a bed of sand and gravel, and in some instances on a bed of concrete. A contract has been let for the manufacture of a quantity of these blocks to carry the experiment out on a large scale. Wherever laid these blocks present a fine appearance and give good satisfaction.

But, in all probability, the step which bids fair to have the greatest influence on the improvement of the sidewalks of Washington is the contract which has been entered into with the Barber Asphalt Paving Company for the construction of asphalt sidewalks in streets wherever ordered, using mainly therefor the asphalt surface taken from Pennsylvania avenue and elsewhere. The specifications for this work are appended to this report.

The idea is to utilize the old asphalt surface composition taken up from Pennsylvania avenue and other streets which are to be resurfaced, by working it over with the addition of a certain proportion of new asphalt and some finely broken white limestone to enliven the color. This surface is to be laid upon a base of bituminous concrete.

It is expected to commence the laying of the sidewalks under this contract in a few days now. An entirely new plant had to be established for working over the old material and this has occasioned delay.

The price for the sidewalk named in the contract with the Barber Company is $1 per square yard.

If the experiment proves as successful and satisfactory as is anticipated the result will be that the city will be provided with very excellent, handsome, durable, and smooth sidewalks at a very low cost.

It is believed that this asphalt sidewalk and the artificial stone block sidewalk, previously mentioned, will be the principal walks hereafter laid in place of the old brick walks.

There is only one method provided for laying improved sidewalks in place of the old ones, and that is by the permit system, either regular or compulsory. Under this system half the cost is borne by the property directly abutting on the new walk.

As this work of improving sidewalks is badly needed I have recommended a large increase in the amount of the appropriation for permit work. There should be not less than $300,000 appropriated for the work. This has to be divided between sewers, alleys, and sidewalks.

CURB.

The use of blue-stone curb has been entirely discontinued in the city streets under the regular street improvements specifically appropriated for and only granite used.

The 8 by 8-inch curb, on a concrete base, has given full and complete satisfaction and this will be chiefly laid in the future.

REPAIRS TO CONCRETE PAVEMENTS.

Appropriation, 1888–'89	$95,000.00
Expended	91,389.83
Appropriation, 1889–'90	215,000.00
Estimate, 1890–'91	150,000.00

The following table exhibits the expenditure of the appropriation for 1888–'89:

Repairing and resurfacing concrete pavements.

Date.	No. of contract.	Name of contractor and locality.	Coal-tar composition, at $18.25.	Asphalt, at $17.	Coal-tar composition, at $1.02.	Asphalt, at $1.02 and $1.44.	Material.	Total cost.
			Cubic yards.	*Cubic yards.*	*Square yards.*	*Square yards.*		
1888. Aug. 11.	947	H. L. Cranford: M street, from Connecticut avenue to Eighteenth.	.....	.....	417.96	.....	.....	$516.43
		Seventeenth street, from Pennsylvania avenue to K.	.....	.....	5,309.60	.....	$8.93	6,178.94
		Thirteenth street, from I and L to N and O.	.....	.....	4,957.50	.....	261.10	6,051.57
		Massachusetts avenue, from Third to Fourth.	.....	.....	785.36	.....	.....	1,209.72
		I street, from New Jersey avenue to North Capitol.	.....	.....	4,564.45	.....	.....	4,701.68
		Fourth street, from G to New York avenue.	.....	.....	3,821.23	.....	.....	5,297.34
		K street, from Seventeenth to New York avenue.	.....	.....	1,606.63	.....	.....	1,695.43
		G street, from Third to New Jersey avenue.	.....	.....	1,369.12	.....	.....	1,755.51
		Pennsylvania avenue (south side), from Nineteenth to Circle.	.....	.....	6,048.63	.....	.....	6,898.75

Repairing and resurfacing concrete pavements—Continued.

Date.	No. of contract.	Name of contractor and locality.	Coal-tar composition, at $18.25.	Asphalt, at $17.	Coal-tar composition, at $1.02.	Asphalt, at $1.02 and $1.44.	Material.	Total cost.
			Cubic yards.	*Cubic yards.*	*Square yards.*	*Square yards.*		
1888.		H. L. Cranford:						
Aug. 11.	947	Pennsylvania avenue (north side), from Twentieth to Circle.	.....	.....	4,503.23	.....	.....	$4,884.17
		Seventeenth street, at Q.	.....	.....	329.98	.....	.....	339.14
		M street, from Twenty-eighth to Thirty-first.	.....	.....	4,579.23	.....	49.11	5,465.01
		F street, from Sixth to Seventh.	.....	.....	.....	1,278.96	26.79	2,193.20
		D street, from Fifth to Sixth.	.....	.....	.....	327.78	.....	492.72
		Grant, from Ninth to Tenth.	.....	.....	.....	289.95	.....	469.72
		E street, at Eighth	.....	.....	.....	377.70	.....	611.88
		Sixth street, from E to F.	.....	.....	.....	1,790.56	.....	3,287.52
		Sixth street, intersection of F.						
		Tenth street, from I to New York avenue.	.....	.....	.....	683.30	267.90	696.97
		G street, from Fourteenth to Fifteenth.	.....	.....	.....	1,931.31	89.30	2,751.69
		Various*	35.84	1,990.868	.....	.....	249.81	35,872.44
			35.84	1,990.868	38,292.92	6,679.56	952.94	91,389.83

* Minor repairs.

The appropriation for 1889–'90 provides $125,000 for resurfacing Pennsylvania avenue from First to Seventeenth streets. This work is now in progress.

The concrete pavements of Washington, increasing rapidly from year to year, require constantly increasing amounts to keep them in repair. There is a large amount of sheet pavement, chiefly coal-tar, laid about twelve to fifteen years ago, which is worn out and can not be kept in decent order by the ordinary system of patching. I give herewith a list of these streets which are in absolute need of a complete resurfacing, with the date when they were laid, the date when they were resurfaced, if this has ever been done, the character of the present surface, and the estimated cost of the work. It will be seen that this amounts to $108,556.87.

List of streets which should be resurfaced during the ensuing fiscal year.

Locality.	Year laid.	Resurfaced.	Character of surface.	Approximate cost.
NORTHWEST.				
Eighth street, northwest, from L to N street	1875	.....	Coal-tar	$4,724.06
Tenth street, northwest, from K to New York avenue	1875	.....	....do	2,087.22
Eleventh street, northwest (east side), from H to New York avenue.	1875	.....	....do	1,311.90
Twelfth street, northwest, from H to Massachusetts avenue.	1875	.....	....do	7,231.00
Q street, northwest, from Fourteenth to Fifteenth street	1874	.....	....do	3,382.91
Fifteenth street, from Rhode Island avenue to Q street	1875	.....	....do	5,729.97
M street, northwest, from Sixteenth to Seventeenth street	1873	1875	....do	3,019.40
Fifteenth street (west side), from I to K street	1873	1875	Asphalt	2,231.30
I street, northwest, from Sixteenth to Seventeenth street	1873	*1877	Coal-tar	5,202.87
Nineteenth street, northwest, from Q to R street	1873	1875	....do	2,692.84
Twentieth street, northwest, from K to L street	1873	.....	....do	1,782.58
Twentieth street, from New Hampshire avenue to Connecticut avenue.	1873	†1875	Coal-tar and asphalt.	6,066.51
Twenty-first street, from K to Q street	1875	.....	Coal-tar	12,283.02
Twenty-second street, from G to Pennsylvania avenue	1873	1875	....do	5,916.32
Pennsylvania avenue (north side), from Washington Circle to Twenty-sixth street.	1877	.....	....do	5,257.42
E street, northwest, from Eighth to Ninth street	1878	.....	Asphalt	1,662.46
Fourth street, northwest, from G to Indiana avenue	1872	1875	Coal-tar	5,954.41
S street, northwest, from Fourteenth to Fifteenth street	1873	.....	....do	3,423.20
G street, northwest, from Eleventh to Fourteenth street	1872	‡1875 §1877	....do	7,337.36
F street, northwest, from Fourteenth to Fifteenth street	1873	..do ...	....do	3,839.00
SOUTHEAST AND NORTHEAST SECTION.				
First street, northeast, from B street north to A street south.	1873	.....	Coal-tar	5,196.36
B street, southeast, from New Jersey avenue to First street.	1873	1875	....do	5,352.36
SOUTHWEST.				
Thirteenth street, from B south to Maryland avenue	1875	.....	Coal-tar	6,872.40
				108,556.87
Minor repairs	.....	.....	.....	50,000.00

* Resurfaced to Seventeenth street from Connecticut avenue.
† Massachusetts avenue to Connecticut avenue, resurfaced.
‡ Thirteenth to Fifteenth street; § Tenth to Thirteenth street, resurfaced.

Streets that should be resurfaced, 1890–'91.

Locality.	Year laid.	Resurfaced.	Character of surface.	Approximate cost.
NORTHWEST.				
Vermont avenue, from Thomas Circle to Iowa Circle	1873	.....	Coal-tar	$7,705.76
Seventeenth street, from K to Massachusetts avenue	1873	1875	....do	9,179.54
N street, from Connecticut avenue to Twentieth street	1873	1875	Asphalt	3,466.98
G street, from Nineteenth to Twenty-first street	1872	1875	Coal-tar	4,849.44
F street, from Ninth to Twelfth street	1877	.....	....do	6,582.75
K street, from Third to Fifth street	1874	1875	....do	7,242.14
Fifth street, from Massachusetts avenue to New York avenue.	1873	1875	....do	4,597.32
				43,624.32

The estimated cost of minor repairs, that is the work of patching and work incidental thereto, is $50,000.

I have therefore asked that, for current repairs to concrete pavements, an appropriation of $150,000 be made.

CONSTRUCTING COUNTY ROADS AND SUBURBAN STREETS.

Appropriation, 1888–'89	$88,980.00
Expended	87,836.04
Balance	1,143.96

The items were as follows:

Locality.	Appropriation.	Expended.	Balance unexpended.
Thirteenth street, extended	$1,000.00	$994.98	$5.02
Howard avenue	7,700.00	7,620.87	79.13
Fourth street, extended	7,500.00	7,499.99	01
Michigan avenue and First street, extended	7,500.00	7,482.23	17.77
Harrison street and Good Hope road	13,140.00	12,692.65	447.35
Washington, Jackson, and Jefferson streets	4,000.00	3,823.97	176.03
Nichols avenue	13,140.00	12,721.35	418.65
Fourteenth street, Chapin, Stoughton, and Boundary	35,000.00	35,000.00	00
Total	88,980.00	87,836.04	1,143.96

Besides the above, Brightwood avenue from Grant avenue to Princeton street was paved with granite blocks under the provision made therefor in the general schedule. This work has cost $26,683.50.

I have asked for largely increased amounts for suburban streets and hope that Congress will be liberal in granting money to them. There is nothing which adds more to the desirability of Washington as a place of residence than well-constructed, smooth, wide county roads and suburban streets, over which people can comfortably ride and drive for health and recreation, and which open up pleasant sections of county where people of limited means can build homes.

REPAIRS TO COUNTY ROADS.

Appropriation, 1888–'89	$45,000.00
Expended	44,996.29
Appropriation, 1890	50,000.00
Estimate for 1890–'91	75,000.00

The details of the work are given in the report of Mr. Beale, superintendent of county roads, which is appended.

The expenses in the different sections were as follows:

Eastern section	$6,235.99
Central section	27,573.59
Western section	11,164.00
Unpaid bills	22.71
	44,996.29

There are many miles of new streets, avenues and roads being laid off in the District outside the city limits, and the travel is increasing, and a heavy additional cost is entailed to keep all in order and repair. It is hoped that for this purpose the full amount of the estimate, $75,000, may be obtained.

The report of Mr. Beale shows the work done under his department.

ROAD FOR FAST DRIVING.

Nowhere in the District is there a good road where fast horses can be speeded with safety and propriety. There are many lovers of good horses who would be delighted to have such a road, and it would seem proper

to look after their wishes in the improvement of some suburban streets. Some wide streets or avenues might be selected and laid off with sidewalk and paved roadway on each side and a dirt road for speeding in the middle. Such roads are recognized and maintained in most cities, and tend to develop fine horses and turn-outs, which always add so largely to the beauty and attractiveness of a city.

GRADING STREETS, AVENUES, AND ALLEYS.

Appropriation, 1888–'89	$15,000.00
Expended, 1888–'89	12,458.32
Appropriation, 1889–'90	15,000.00
Estimate, 1890–'91	50,000.00

This appropriation limits the price to be paid for cutting down or filling up a public highway to 10 cents per cubic yard. This is from one-fourth to one-half of the cost ordinarily of the work. The appropriation is an exceedingly useful one, as it enables the District to bear a share of the expense of grading new streets, and to get work done at a low rate, which would, if not so done, ultimately cost much more. The appropriations as made last year and the year before are not large enough to meet the demands upon them, and I recommend an increase to $50,000.

The following table exhibits the work done under contract from this appropriation:

Grading.

Date.	No. of contract.	Contractors.	Locality.	Yards.	Price.	Contract work.
1888.					*Cents.*	
	Order	William Buckley	Third street, from I to K	700.00	10	$70.00
Aug. 24	967	T. H. Lyons	Alley, square 390	5,638.98	10	563.89
Aug. 31	982	George Truesdell	R and S streets, from Lincoln avenue to Brentwood road.	32,889.00	10	3,288.90
Sept. 8	984	H. Waters	N street, from Twenty-fifth to Twenty-sixth.	10,111.50	10	1,011.50
Nov. 10	1019	Washington Brick Machine Company.	Twelfth street, from Boundary to Mount Olivet road.	3,523.00	10	352.30
Oct. 29	1013	A. M. Green	Jefferson street	3,032.00	10	303.20
1888.						
Sept. 14	987	D. McNamara	L street, from North Capitol to I.	450.00	10	45.00
Dec. 15	1033	J. M. Brown	Wyoming avenue	4,200.00	10	420.00
Nov. 8	1023*	B. H. Warner	Brightwood avenue	12,669.00	10	1,266.90
1889.						
Jan. 17	1038	H. Waters	First street extended	1,982.60	10	198.26
Jan. 30	1040	J. Paul	Sixteenth street extended	2,645.20	10	264.52
	Order	D. Horan	Boundary northeast, from Fourth to Fifth.	895.00	10	89.50
Apr. 10	1051*	G. Truesdell	Second and Sixth extended	25,000.00	10	2,500.00
Apr. 19	1055	S. Talty	O street, from Twenty-second to Rock Creek.	7,222.00	10	722.20
May 3	1057	L. Chappell	Boundary street, from Tenth to Thirteenth.	1,542.00	10	154.20
May 29	1066	F. W. Heidekufer	Burleith	10,846.00	10	1,084.60
May 7	1059	G. Truesdell	Connecticut avenue extended.	2,500.00	10	250.00
1888.						
Dec. 29	1036*	H. A. Griswold	Anacostia			
	Order	W. J. Frizzell	Boundary street northeast			
				125,850.20		12,585.02

*Incomplete.

CONDEMNATION FOR STREETS, AVENUES, AND ALLEYS.

Appropriation, 1888–'89	$10,000.00
Expended, 1888–'89	8,626.75
Appropriation, 1889–'90	5,000.00
Estimate, 1890–'91	75,000.00

The large increase of appropriation is asked because the meager appropriations of the past few years are practically valueless, as almost every condemnation which it is desired to make involves a larger amount than the entire annual appropriation. There are a number of cases on hand which have met with the approval of all the authorities and are manifestly for the public good, but which have had to be held up owing to lack of funds.

SIDEWALKS ABOUT PARKS, PUBLIC RESERVATIONS, AND BUILDINGS.

About many of the parks and reservations, and in front of some of the buildings of the General Government and of the District, the sidewalks are old and worn out, rough, and past being made first-class. These sidewalks should be replaced by improved ones, and an appropriation of $25,000 is asked for the purpose. The unities demand that handsome parks and buildings should have sidewalks in keeping with them; and a nice sense of propriety requires that the Government should provide at least as good sidewalks for its own property as are provided wholly or partly by or at the expense of citizens.

PARKING COMMISSION.

Appropriation, 1888–'89	$18,000.00
Expended, 1888–'89	17,995.97
Appropriation, 1889–'90	18,000.00
Estimate for 1890–'91	28,000.00

The following is the statement of the work done, trees planted, etc., during the fiscal year:

Trees in streets July 1, 1888	64,920
Trees planted during year	2,161
	67,081
Trees removed, lost by storm, etc	896
Total number June 30, 1889	66,185
Wooden boxes removed	7,302
New boxes made	4,000
Trees protected with wire netting	5,249
Trees white washed	8,634

I have the honor to invite special attention to the report of the parking commission and the superintendent for the parking commission, which are herewith.

The trees of the streets of Washington are among the chief attractions of the city, making the city far more beautiful, comfortable, and healthy than it could possibly be without them, and no reasonable expense should bespared to care for them in the most perfect manner possible, and to addthem to all streets and roads as soon as they are prepared to receive them. In no other way can the same amount of money be expended that will add so greatly to the beauty and comfort of the city as when expended in the care and extension of our tree system.

The report of the parking commission gives very cogent reasons why the annual appropriation of $18,000 should be increased, and I earnestly recommend that it be increased to the amount named by them.

I also fully concur in the recommendation that Mr. Trueman Lanham, the superintendent, have his salary raised from $1,200 per annum to $1,400, an increase of $200 per annum. Mr. Lanham is one of the most careful, hard-working, and efficient men in the District service and well worthy of the consideration asked.

REPORT OF THE PARKING COMMISSION.

The parking commission has the honor to submit the following, its nineteenth annual report of operations during the fiscal year ending June 30, 1889:

Removing guard-boxes from trees is steadily performed. It is a work of no small magnitude, but of vast improvement to the city. Where it is found necessary these boxes will be replaced by wire screens, but it is not at present proposed to place the wire netting except where it seems essential. There are many streets and portions of streets where people are careful that horses are not permitted to nibble and injure the trees; in such localities the wire protection is not needed, and the trees are better without it. But there are many places where wire must still be used, and these will receive attention as soon as the material is available.

The parking commission is greatly impeded in the proper performance of the work which is considered essential to the maintenance of the trees for want of sufficient appropriation.

There are many thousands of the older trees which have outgrown the space originally prepared for them, and are now suffering for want of needed attention. Where the original soil is altogether unfit to sustain growth the holes require extension and supplied with proper soil. Much good has resulted from the mere enlargement of the unpaved space around the stem. Where this has been done the effects of increased vigor are strongly marked in the result of stronger shoots and more deeply colored foliage.

As the trees increase in size they require a proportionate increase of water, and in most parts of the city this supply is controlled by the amount of clear surface around the base of the tree. Hence the necessity of having this space as extensive as conveniences in other respects will permit.

There are yet remaining many trees in the parkings which should be removed. On all, except a few of the widest streets and avenues, one row of trees at the curb is all sufficient for shade. It is one of the peculiarly happy arrangements in the system of improvements in this city that the streets are so wide, or rather that the building lines on opposite sides were so far apart, that the curb line, with its row of trees, is removed from 15 to 40 feet from the building line, which insures shady promenades and yet admits sunlight to the parkings, thus allowing the successful growth of grass and flowering shrubs, without enveloping dwellings in so dense a shade as to prevent thorough ventilation. It would be a good rule to establish that no trees be allowed in parkings less than 40 feet in width.

In the earlier stages of improvements it was quite excusable for citizens to protest against the removal of trees, which, on account of the narrowing of the streets, were left in the parkings; the young trees set out on the curb lines gave but little promise as substitutes for their older neighbors; but that time has passed and all inside trees should be discarded for sanitary reasons if for nothing else.

It has now become quite evident that if the trees in this city are to be maintained in their beauty and usefulness in a degree at all commensurate with their value to the city, the appropriation for the expenses of the parking commission must be materially increased. No change has been made in the amount annually allotted for this purpose for fifteen years. During this time the city has constantly been extending, and the number of trees set out yearly has averaged over 3,000. As the trees attain large dimensions the labor of attention and care increases in proportion; the necessary pruning, keeping sidewalks and streets clear from the intervention of branches, occupies much time and consequent expenses, to the exclusion of other important matters.

It is important, both for the health of the trees and the cleanly appearance of the city, that no grass or weeds should be allowed to gain a footing around the trees; this is an eyesore which the means at command prevent removal.

The cultivation of the trees is deficient; thousands of them require immediate attention in this respect, which they cannot receive. These evils are annually increasing, and if not counteracted will soon visibly impair one of the greatest characteristics of the city, its unequaled arborial wealth. We therefore respectfully suggest that an addition of $10,000 be made to the usual appropriation, so that the work of the parking commission may be effectually performed.

The accompanying report of Mr. T. Lanham, superintendent of parking, presents the special details of operations, and we have the honor to again recommend that Mr. Lanham's salary be increased by $200 per annum; his devotion to his arduous duties merits this recognition

* * * * * * *

I have the honor to submit the following statement of the work performed during the fiscal year ending June 30, 1889.

In addition to the usual routine of work of caring for trees and parkings, 334 old, decayed and dangerous trees have been removed. The sycamore trees on Seventh, Tenth, and one square on Third street, East Washington, also those on M street south-

west, between South Capitol and Four and-a-half streets, were closely pruned and have made a fine growth of young wood.

The luxuriant growth of the trees during the year made it necessary to do much pruning to relieve the sidewalks, and, as directed by you, particular attention has been given to the relief of the street-lamps from the dense shade about them. The roots of the larger trees on many of the streets have so disturbed the pavements that two of the most careful men have been employed the entire year, weather and condition of ground permitting, in pruning roots and relaying the brick.

All excavations for young trees have been properly paved around. The bricks taken from the excavations, numbering 35,148, were hauled in the yard corner Third and B streets southwest, and delivered to the engineer department of the District of Colnmbia on the orders of the proper officers, and receipts taken therefor as delivered.

No coal was purchased, old wood from trees and tree-boxes being used instead. Seven thousand three hundred and two old wooden boxes were removed from the streets, hauled to the nursery, assorted, and piled; the sound material therefrom was used in making 4,000 boxes; 2,300 of which were made large to replace small boxes, which the trees had outgrown, and 1,700 were made small and used on the young trees set out during the year; 18,000 chestnut stakes, were purchased and used; 1,000 rods of woven wire was purchased and used in protecting 5,249 trees from injury by horses etc.; 5,178 trees without boxes and 3,456 trees with boxes were given a coat of lime wash. This was put on soft maples chiefly, which were affected by scale; 2,600 pounds of leather straps were purchased and used. In some localities it is impossible to keep straps on the young trees, as they are continually being cut off, presumably by boys for whips.

Storms were of frequent occurrence during April, May, and a portion of June, and much time was spent on repairs to damages caused by same.

Caterpillars were not numerous and but little timewas consumed in their removal from the trees.

Thirteen hundred and twenty-three tree-holes were made, the earth removed and holes filled with good soil. I have endeavored to carry out your special instructions in connection with this branch of the work, and I think no holes have been slighted as to size and quality of the soil placed therein. This part of the work is expensive, as in many cases both the dirt removed and the soil used have to be carted long distances.

Thirteen hundred and twenty-three young trees were planted; 418 young and thrifty trees were replanted, to take the place of that number of inferior trees. Four hundred and twenty young trees were planted at Brookland, you furnishing 345 of this number and doing the planting, the proprietors bearing all other expenses connected therewith.

Owing to the fact that some streets placed under contract for improvements were not finished until too late this spring for tree planting, they yet remain without trees, but a memorandum has been made, and they will be given attention as soon as the work of making excavation for young trees is begun.

Report of year ending June 30, 1888, shows number of trees on streets to be		64,920
Number trees planted and replanted during year ending June 30, 1889		2,161
Total		67,081
Old trees removed	334	
Trees lost by storm	26	
Trees removed from Thirteenth street extended by changing grade and not replanted	20	
Trees removed by contractors from streets and not replanted in West Washington, and on account of change grade	98	
Trees replanted which took the place of that number inferior trees already counted, but included in the number of trees (2,161) planted during year	418	
Total		896
Trees on streets July 1, 1889		66,185
Appropriation		$18,000.00
Expended for labor	$14,530.18	
Expended for material	3,465.79	
Total expenditure		17,995.97
Appropriation not expended		4.03

BRIDGES.

Ordinary care of bridges:	
Appropriation 1888–'89	$2,500.00
Expended 1888–'89	2,465.12
Appropriation 1889–'90	3,400.00
Estimate 1890–'91	5,000.00

I have asked for an increased appropriation for the ordinary care of bridges because I believe it to be the part of wisdom to employ a man skilled in bridge construction as general superintendent of bridges, who shall be constantly engaged inspecting all the bridges of the District and superintending their repair whenever and wherever necessary. Such a competent man should receive fully $1,200 yearly. Another addition of $400 is asked that the new Woodley Lane bridge and the old Bennings bridge may be lighted with oil-lamps if no other light—gas or electricity—can be procured.

If the new Pennsylvania avenue bridge is completed and turned over to the District of Columbia for care and inspection, as in the case of the Free bridge, this appropriation should be still further increased by $660, to pay for a resident bridge-keeper.

CONSTRUCTION AND REPAIR OF BRIDGES.

Appropriation, 1888–'89	$14,500.00
Expended, 1888–'89	14,472.44
Appropriation, 1889–'90	10,000.00
Estimate, 1890–'91	20,000.00
Expended for bridges from the emergency fund of 1888–'89	2,913.23

The fiscal year 1888–'89 was a particularly severe one on bridges, owing to the heavy floods, which carried away several bridges and injured many others, rendering extensive repairs necessary.

The principal bridges carried away were those over Rock Creek, at the old military road crossing, which has been replaced; the bridge at Blagden's Hill, which has not been replaced, owing to lack of funds; and the old Woodley Lane bridge, which, owing to the near completion of the new iron bridge, it was unnecessary to replace. Several others of less importance were washed away, which have all been replaced.

The principal injuries sustained were at the Pierce mill bridge, the central pier of which was nearly carried away. Much of the masonry was thrown down, and it was necessary to entirely rebuild the pier, which was done at an expense of $419.48. At the flood the water flowed over the bridge to a depth of about 5 feet, lodging logs and floating débris among the timbers. This is an old wooden bridge, and not sufficiently high above the stream for safety or for convenience of approach. I have the honor, therefore, to recommend the construction of an iron bridge on the present abutments and piers, which are in good condition, at an elevation of about 10 feet above the present structure. The estimated expense of this iron bridge and the necessary changes of grade to approach it is $12,000.

Another bridge injured was the navy yard bridge, leading to Anacostia. During the great flood of June 2 the water stood about 2 feet above the flooring of the bridge, which was lifted bodily out of place, permitting the floor beams to topple over and be displaced. It was necessary to take up the floor, straighten up the floor beams, and replace the floor. Some small repairs to the iron work and draw were also required.

In this connection I have the honor to invite your special attention to the extreme desirability of making the necessary changes in this An-

acostia bridge to accommodate the travel over it, and to place it above the danger of being washed away in times of flood.

I repeat here the allusion in my last annual report to this important subject, and give again the estimate of the cost of the changes required. I earnestly recommend that this appropriation be secured, if possible.

The bridge to Anacostia is a most unsatisfactory structure, very deficient in width for the travel over it. The draw, as now constructed and operated, is a very great annoyance to the people compelled to use the bridge. The bridge is deficient in strength; some of the piers have settled and are canted out of place. In order to prevent further settlement and deflection, it will be necessary to re-enforce the existing piers.

The bridge is 20 feet in width, with two sidewalks of 5 feet each. It is 1,256 feet long between end piers, the floor is 9 feet above low water or 5 feet above high water. It has a draw-span of 30 feet on the Bascule principle, operated by man power. To raise and lower this draw and permit the passage through it requires ordinarily about half an hour. Frequently teams stopped extend the full length of the bridge and far up the street leading to it. The bridge being too low requires the draw to be raised to allow the passage of anything but a row-boat.

The present condition of things is the cause of great complaint, and I have examined into the matter carefully, and recommend the following plan for the betterment of the bridge.

(1) That the bridge be raised 10 feet or more vertically, and the roads and streets leading to it be adjusted to its new grade.

(2) That the bridge be doubled in width by taking the six eastern spans and putting them beside the six western spans, and constructing a new draw-span, which will form with the present draw-span a continuous passage-way through the bridge whenever necessary.

(3) That an embankment be constructed in place of the six spans removed from the eastern part of the bridge. This embankment can be given the necessary slope to reach the grade of the bridge. The water of the river, where it would be constructed, is very shallow.

The height of the bridge above the water would permit the passage of nearly everything which would have any occasion to go above the bridge, and the draw would have to be opened but very seldom, but would be there when required.

ESTIMATE.

Estimated cost for constructing Anacostia Bridge, the work to include the removal of six spans on the Anacostia side and placing them beside the present bridge on the Washington side, and constructing an earth causeway in place of bridge removed.

300 piles and driving, at $10	$3,000
50,000 feet B. M. timber and plank in foundation	1,500
1,000 cubic yards of masonry, at $20	20,000
1,000 cubic yards of masonry, at $12	12,000
Building one-span draw	1,500
3,200 cubic yards of riprap around foundation	4,800
1,000 cubic yards rip-rap on causeway slope	2,000
Taking down and setting up six spans of bridge	5,000
37,000 cubic yards filling in causeway	18,500
2,700 square yards macadam roadway	2,220
Coffer-dam, pumping, and dredging	5,000
Floor beams, floor, and painting	1,500
	77,020
Contingencies, 10 per cent	7,702
Total	84,722

In round numbers, $85,000.

A petition is on file signed by a large number of people asking for this work.

The old wooden Benning's Bridge, over the Eastern Branch, was also injured by the flood, though not seriously. It was entirely covered with water, and fear was felt that it would be floated off. It will be necessary, at no distant day, to replace this bridge, and when this is done it should be of iron, and placed several feet higher than the present structure.

The iron bridge over Rock Creek, at K street northwest, was quite seriously injured during the flood, and threatened with complete destruction by canal-boats getting loose up the creek and floating down against it. The roadway and sidewalk boards were bent and broken, and the railing torn away. They have all been repaired. This bridge is not a very substantial structure at the best. It would be relieved of a strong element of danger if it were raised, so that in times of flood floating canal-boats, etc., could go under it instead of jamming against it.

The Chain Bridge, so far as the superstructure was concerned, was the most seriously injured of any of the iron bridges of the District. The water at this point during the flood rose to a great height above ordinary stages, and in the middle of the channel the lashing waters swept over the floor of the bridge. It was struck several times by immense floating logs, boats, etc. One log about 2 feet in diameter became interlocked in the iron trusses, causing severe strains and bending some of the members. A very heavy boat struck the lower chord and bent it badly, and then swung around underneath the bridge, knocking one of the heavy 30-inch floor beams out of place and bending it like a bow. Many of the castings at the foot of the Phœnix columns were broken. The bridge was rendered dangerous and had to be closed to travel for some time. The expenses of repairing this bridge were $4,943.63.

Before the flood preparations were being made for painting this bridge which it sadly needs, and also for repairing the masonry piers and abutments. This work has had to be stopped, not only on this Chain Bridge, but on all other iron bridges, on account of the heavy expense for repairs.

The flood left no observable marks of damage on the Free or Aqueduct Bridge, except to soften up and slightly undermine the embankment approach on the southern end. This was quickly repaired by the Quartermaster's Department, U. S. Army, but a few days after the waters had subsided Inspector Hutchinson discovered a displacement of one of the trusses at its footing on the second pier from the Virginia side, and also that the extension of the upper chord had buckled above this pier.

He immediately reported it to this office and to Col. P. C. Hains, who built the bridge, and a further and careful examination revealed the fact that the main channel pier, the first from the Virginia shore, had settled to the north about 3½ inches. An immediate examination of the pier was necessary, and an expert diver from New York was engaged to make it. His examination revealed the fact that a considerable portion of the lower masonry of the pier at its western and northern side had been carried away, undermining it and allowing it to settle. Observation showed that the settling still continued, though very slowly. Prompt action was necessary if the pier was to be saved. It was decided to fill this eroded cavity with quick-setting Portland cement concrete, and this was done with the assistance of divers brought from New York, under the direct supervision of Mr. C. B. Hunt, civil engineer.

Mr. Hunt's report is herewith appended to this report and gives all data of the work.

I have to submit the following report of the work of repairing the foundation of pier No. 1 of the Aqueduct Bridge.

The work was placed in my personal charge on Friday, July 12, and the purpose to be accomplished was the restoration of such portions of the foundation masonry of the pier and of the natural material on which it had rested as had been washed away by the freshet of June 2, and by subsequent erasion.

The method employed was to prepare concrete on a deck scow in the proportions of one part of hydraulic Portland cement, one part of sand, and two parts of fine broken stone; to place this concrete in bags of about two bushels capacity, and to build these bags into the cavity discovered under the pier until it was substantially full; after which to fill the balance of the cavity with mass concrete lowered in buckets and tripped.

The submarine work was done by two divers, who divided the day; one working five hours in the forenoon and the other five hours in the afternoon. The labor force averaged about eighteen men.

The concrete placed in bags was mixed quite dry, using four buckets of water to each barrel of cement, which made the mass about the consistency of brown sugar. For the mass concrete the amount of water was about doubled in order that the tubful should not be loose and so wash out when tripped. For the bag concrete the Heyn brand of cement was generally used, and for the mass or tub work the Hilton brand—a quicker setting and better adapted to the purpose.

The total amount of cement used was 351 barrels, of which 221 barrels was used in bag concrete and 130 barrels in tub work. The total number of bags of concrete placed was 1,450, an average of 6½ bags to each barrel of cement. The total amount of other concrete material used was 184 barrels of sand and 870 barrels of broken stone, this last material containing an appreciable percentage of particles approximating sand in fineness, to allow for which the measures of sand proper were reduced. The broken stone used for the tub concrete was a mixture of fine and coarse in the proportion of three barrels of the former to two of the latter. As a rule, four barrels of cement were put down in two double batches and then the diver came up to rest.

Only sufficient material for each day's work was carried on the scow, which was loaded each morning at the wharf and taken to the work.

The hoisting tackle was swung from the iron bridge structure, no derrick being used. The scow was moored by anchor lines and by guys leading in different directions to the bridge structure above, it being of the first importance that her position should remain unchanged during the work of lowering the material.

The general character and extent of the work are shown on the accompanying sketches, which are believed to be self-explanatory.

The settlement of the pier, which had progressed to such an extent at the date of my first examination, July 6, as to cause a movement of its top northward to the amount of nearly 3 inches, had increased this amount to 3½ inches on the 11th and to 4 inches on the 17th, since which time only a most trifling movement has been observed on the 19th. The structure is now believed to be stable, and the prospect of its remaining so will be better than before the freshet of June 2 so soon as the proper rip-rap protection be placed around the pier.

The anchor bolts of the second span of bridge were cut on the 10th and this truss then made independent of the pier, a most fortunate con-

dition, since the subsequent movement of the pier would probably have done serious harm to the iron bridge had these bolts not been cut.

Span No. 2 should be moved southward to its original position, and the bed plates on pier No. 1 should also be moved to their proper position relative to span No. 1 in order that the roller end of span No. 1 may have its proper bearing.

No harm, that I can discover, has happened to the trusses of the bridge, and the structure I believe to be thoroughly safe.

As a result of observations made during my examinations of the entire iron structure. I would respectfully recommend that it be given a fresh coat of paint at as early a date as practicable.

I inclose a transcript of the report (oral) of the diver engaged in the examination of the other piers and abutments of the bridge.

The only accident of any kind occurring during the work was the accidental loss of a barrel of cement, which fell overboard during loading.

Record of observations made by Diver Robert Rogers at Aqueduct Bridge, July 12, 1889.

South abutment.—Twelve or 15 feet of water; masonry in excellent condition along entire face. Well pointed up. "As good as it ever was." Rip-rap against face of pier.

Pier No. 2, north face.—No cavity found except a slight opening just below a 12 by 14 timber, which (the timber) runs the full length of the pier. The bottom is flush with the lower surface of this timber—silt on the bottom—same as pier No. 1, north face. A large tree is lodged at northwest nose of pier; has many branches. Masonry in good condition.

South face.—Condition of masonry same as the north face. Fore and aft 12 by 14 timber gone, but evidence of its having been there very clear. Found 4 by 12 timbers which had been spiked on top of 12 by 14 and ran under masonry. These occurred about every 6 feet. Spikes found in end where 12 by 14 had been. At down-stream end and for three-fourths way along pier material was clean gravel, with no trace of sand, from size of pea to hickory nut. Masonry in good shape, and well laid and no cavity.

[NOTE.—The tree referred to was removed and towed ashore.]

Pier No. 3, north face.—In good condition. No stringing piece found here. Small hollow found under middle of the pier, backed up with good masonry. Bottom silt as at pier No. 1. Silt extends full length of pier and should be well covered with rip-rap.

South face.—Same as north, except that around southwest end there is a hollow scoured out about 10 feet along the face. Silt in the bottom sloping off rapidly towards the south. The scour runs back 3 feet under the pier and 10 feet along its face.

Pier No. 4, south face.—Masonry in good condition; scour under about three-fourths of length of pier from up-stream end, about 3 feet back. Material of bottom fine sandy silt; some mud under lee of pier.

North face.—No scour. Masonry in good condition. The fore and aft 12 by 14 timber found again on this face. A breast-work of logs and brush lodged at the northwest nose of the pier.

Pier No. 5, south face.—No scour. Masonry in good condition. No stringer but plank running under the pier. Mass of brush at the southwest corner with large trunk in the mass.

North face.—No scour. Masonry rough but in good condition; some mud. The timbers running under the masonry were found, and instead of being 3 inches by 12 inches, as heretofore noted, they are 12 inches by 12 inches framed down to a 3 by 12 lip, covering the fore and aft timber.

This fore and aft timber not found here.

Pier No. 6, north side.—Masonry in good condition, except at northwest nose, where there is a large cavity where the masonry has fallen down northward, so that a man can walk under the overhang of the pier. The face beyond is very rough and the diver considered it too dangerous to investigate very far back. No timber found and no brush or drift.

[NOTE.—Mr. Rogers advised a more thorough examination of the nose of this pier that there might be no chance of scour from the cavity. If the bottom showed bad it might be well to scour out the sand with a jilt and build a bulkhead of concrete bags.]

A second examination was made on the 26th by another diver, who again reported the facts as above, and stated that thorough rip-rap protection would preserve the foundation.

South side.—Masonry in good condition. No scour; 12 by 14 timber found across the down-stream end of the pier. Bottom rip-rap rock.

Pier No. 7, south side.—Masonry in good condition. Ends of timber showing in several places. On the east end find bed rock. Bottom sandy and gravelly.

North side.—Masonry in good condition. Bottom stiff clay; bed rock showing in places. Timber shows in places.

Pier No. 8, *south side.*—Masonry in good shape. Bottom covered with loose rock and bed rock showing in places. Timber showing on east end.

North side.—Masonry in good condition. Bottom composed of broken rock and stiff mud or clay.

Pier No. 9, *abutment, south side.*—Masonry in good shape. Bottom stiff mud and clay. On the face of the pier there are three perpendicular piles about 12 inches by 15 inches extending about 5 feet above the mud.

Subsequently to the placing of the concrete, 952 tons of rip-rap have been placed about the pier. This rip-rap was of very large stones, many of them weighing from 4 to 5 tons. The pier has stopped settling and it is believed to be as fully as good, if not better, than ever.

The serious consequences which would have resulted had this pier given way illustrate very fully the necessity for a careful and competent inspection at short intervals of all bridges.

The other piers of this bridge were examined by the diver and his statements are given in Mr. Hunt's report. These show that there is considerable work below water needed to put these piers in a thoroughly safe condition and repair damages done by the eroding waters.

I have asked for a largely increased appropriation for construction and repair of bridges to enable this most desirable work to be done and to enable all iron bridges to be thoroughly repaired and painted.

MEMORIAL BRIDGE TO ARLINGTON.

Undoubtedly, the bridge which the general public of Washington and the myriad of visitors to the city would prefer to see constructed immediately is the bridge leading from the foot of New York avenue at the Observatory grounds, across the Potomac to Arlington and Virginia. This bridge has been under discussion for a number of years and several bills have been introduced in the House and Senate looking to its construction. It is generally recognized that an opportunity here exists to build a needed structure, and at the same time erect one of the most appropriate monuments ever erected to the memory of man by dedicating the bridge to the honor of General Grant. On account of the high lands on this side of the river, the bridge could be so erected as to be of comparatively little obstruction to the navigation of the river, by keeping it high enough, so that all tugs, steamers, and small craft of every description should pass freely beneath it, and providing a draw, which will permit the passage of high masted sailing-vessels.

Arguments in favor of the early construction of this bridge are ever increasing in number and strength. Within the past year the mortal remains of General Sheridan have been interred at Arlington.

A grand avenue leading to the home and tomb of Washington has been surveyed and will undoubtedly be constructed in the near future.

It is impossible not to recognize from the tone of the public press that there exists throughout the country, and especially among his old comrades in arms and in council, a strong and ever-growing desire to have the remains of General Grant removed from their present wretched and unsatisfactory resting place, in New York City, to the hallowed and

classic national ground at Arlington, there to lie among his fellow-comrades who are buried there. It requires no prophet to see that this will be done; the sentiment in favor of it is too strong to admit of its doubt. When done there will be a greater reason than ever for the construction of this bridge to facilitate the journey of the thousands of visitors to the Capitol who will wish to look upon the last resting places of our great and cherished heroes.

It would seem highly proper and commendable for Congress to take action looking to the removal of the remains of General Grant to Arlington, and at the same time to provide for the erection of a monument to his memory in the shape of a grand bridge, suitably designed, from the nation's Capital across the Potomac to his tomb.

NEW BRIDGES NEEDED.

Besides the new bridge needed to replace the old wooden structure at Pierce Mill, and the reconstruction of the Anacostia Bridge, already alluded to, I think that provision should be made for the construction of a handsome iron bridge over Rock Creek at Massachusetts avenue extended. Among the reasons why this bridge should be provided for are the facts that railroad charters have been granted on the only two direct routes leading from the city into the valuable region of territory about and this side of Tennallytown, namely, the Tennallytown and the Woodley Lane roads. This is the most elevated portion of the District and must ever be a favorite with people driving.

Another reason for the construction of the bridge is that convenient access can be had to the new Naval Observatory, now under construction.

I recommend that an appropriation of $150,000 be secured, if possible, to erect a handsome bridge at this point.

Another bridge which is strongly advocated is one from near or at the foot of South Capitol street across the Eastern Branch to reach the lands along the Potomac to the south. Such a bridge would give convenient access to a large territory which is now reached by roundabout ways. As this bridge would cross the navigable waters of the Eastern Branch and would to a greater or less extent affect the approach to the navy-yard, it would seem proper that the plans for it should be prepared under the joint direction of the War and Navy Departments and the District government. No estimate can be made until it is known what character of bridge would be suitable to all purposes and interests. But whatever the plan adopted may be, one thing is certain, and that is that the bridge should be handsome in design and ornamental in construction. It would occupy a very prominent position where every one approaching Washington by water would see it, and no architectural monstrosity or cheap affair should be permitted.

SUMMARY OF APPROPRIATIONS ASKED FOR BRIDGES.

Ordinary care	$5,000
Construction and repair	20,000
Pierce Mill bridge	12,000
Anacosta Bridge	85,000
Massachusetts avenue, extended	150,000

WOODLEY LANE BRIDGE.

Last year Congress made an appropriation of $35,000 for a new bridge over Rock Creek at Woodley road. Contract was made with the Groton Bridge Manufacturing Company, and the bridge was commenced

September 15, 1888. This contract was very advantageous to the District of Columbia, because the contractors were enabled to use three spans of iron bridge constructed for the Eastern Branch Bridge, but which were not used there owing to the changes of plans required on account of the Baltimore and Potomac Railroad Company crossing at the western end of the bridge.

Without this fortunate circumstance the bridge actually built would have cost fully $50,000. The bridge proper was completed July 18, 1889, but the approach has not yet quite been completed, although it has been passable for some weeks.

STEAM RAILROADS.

The steam-railroad question remains practically unchanged since my last annual report. Both the Baltimore and Potomac and the Baltimore and Ohio have made extensive and expensive improvements at their passenger depots, indicating an intention of maintaining their existing passenger termini as long as possible. A sturdy and persistent effort has been made, during the past year, by some of the citizens of South Washington to compel the Baltimore and Potomac Railroad Company, and the business men directly benefited thereby, to remove all side-tracks, switches, etc., not specifically and definitely authorized by Congress, and the matter is now in court. The decision in the matter will be of great interest.

Washington is growing with great rapidity, and the railroads will require constantly increasing facilities for the transaction of their business. The destruction of the Chesapeake and Ohio Canal has thrown a heavy additional burden upon the railroads, and this, united with the natural growth of business, finds them with entirely inadequate facilities for the handling of freight. In some instances cars destined for the city are delayed for weeks before they can be brought in and unloaded. Serious annoyance and loss is caused by this delay.

The railroad companies are powerless to remedy the evil, for under the decision of the courts and the opinion of the law officers of the Government there is no power inherent in the Commissioners to permit them to extend their tracks into land which they might acquire for the purpose.

Neither have the railroads proper facilities for handling their passenger traffic on special occasions, like the Triennial Conclave of Knight Templars, the Presidential inauguration, etc., and it is necessary for them to have greater facilities either of a permanent or temporary character.

The granting of further extensions and privileges should be in accordance with some general plan, which should be as little detrimental to the public and as beneficial to the railroads and the people directly interested as possible. The sooner this general plan is adopted the better, for the difficulties of its adoption will increase with time.

It will never be possible for any plan to be proposed which will be acceptable to all interests, and any one which could be adopted would undoubtedly have many defects. The question is almost exclusively one of municipal and railroad engineering, and it would seem that the most reasonable way of arriving at a satisfactory solution of it would be to convene a board of engineers skilled in municipal and railroad work, and before whom the citizens of the District, the District authorities, and the railroad officials could appear. This board could probably agree upon a plan and make an estimate of its cost. This would

furnish a proper basis for Congressional action, and the question might be settled. Until it is settled the railroad problem will be a constant source of vexation and annoyance.

STREET RAILWAYS.

During the year very considerable progress has been made in the betterment of the street railways and street railway service of the city.

The clause in the last appropriation bill, authorizing railroad companies to substitute other motive power than horses, under certain restrictions, and requiring them within certain periods to replace old-fashioned and objectionable rails with modern grooved rails, has had an excellent effect. Under the law the Washington and Georgetown Railroad Company have contracted for and have under construction a first-class cable road on Seventh street from the Arsenal to the boundary. This company also, in connection with the repairs on Pennsylvania avenue from First to Seventeenth streets, and on Fifteenth street, have substituted groove girder rails for the old center-bearing stringer rails. The Metropolitan Company have done the same thing on East Capitol street, and the Columbia road over a considerable portion of their line.

The order of the Commissioners of April 19, 1889, prohibited the laying of cobble-stone pavements between rails or tracks on any street paved or ordered to be paved, and required Belgian blocks, or in lieu thereof concrete pavement. This order, if strictly adhered to, will have the effect within the next few years of supplanting the old cobble nuisances with proper and satisfactory pavements.

Two new lines of street railway are under construction, the electric road, with overhead wires, up High street in Georgetown and out the Tennallytown pike to the Loughboro' road, and the road out Brightwood avenue from the boundary to the village of Brightwood.

The Soldiers' Home and Eckington road are also making preparations to extend their line out Fourth street extended to the Bunker Hill road.

The managers of the main railway lines of the city are earnestly seeking for some satisfactory motor to replace horses, and as soon as found I am satisfied that it will be adopted.

The Electric road along New York avenue to Eckington has, as far as appearances go, demonstrated the practicability of the overhead-wire system in the city, and the use of the system allows the avenue to be paved from curb to curb with asphalt. This, in conjunction with the use of grooved rails of the best quality, puts the surface of the street into as good condition almost as if no tracks were there.

The line of poles along the center of the street and the overhanging wires are obstructions and disfigurements to the street which I do not think should be permitted to extend to other streets.

While a strong effort is being made in this as in most other cities to compel existing wires to go underground it would seem inconsistent to permit another class of wires to go up in the most prominent part of the street. If electric-railway wires can, with propriety, be erected in the center of the streets so can telegraph, telephone, and electric-light wires.

Carried to a logical conclusion this would mean the obstruction and disfigurement of the streets of the city by lines of poles and broad bands of wires along the center thereof.

HERDIC LINES.

I desire to invite your attention to the use and occupation of the city streets by omnibus or herdic lines. These herdics are now run on many of the city streets, and in a number of instances parallel with and in the same streets with railway lines.

While their convenience to many people is unquestioned, there are certain features connected with their continuance that call for careful consideration.

In the first place, they are heavy vehicles with narrow tires, which follow one another in almost the same track at short distances apart all day long and way into the night. This hastens the wearing out of our smooth street pavements, and throws a heavy additional burden on the city for their repair. This is particularly the case in streets with a comparatively narrow roadway occupied by street-railway tracks.

During slippery weather these herdics take to the railroad tracks on account of their roughness, and the street-car companies are thus compelled to furnish pavement for their rivals to travel upon for a considerable portion of each winter. This is manifestly unjust to the car companies, who are compelled to pay for paving their tracks, the space between their tracks, and 2 feet exterior thereto, and to keep the same in repair. It would seem but justice to require that the herdic lines should be required to pay a certain proportion of the expense attendant upon keeping streets used by them in order, one-half or one-third.

On narrow streets occupied by car-tracks these herdics are considerable of a nuisance to people driving, on account of their long axles and frequent stoppages, the confidence of the drivers in the strength of their vehicles, and their attention being absorbed in soliciting passengers and seeing that fares are deposited. The prevailing war on bobtail street cars could with equal, if not greater propriety, be urged against bobtail herdic lines.

THE DISTRICT VETERINARIAN.

Although not an official of the engineer department, the District veterinarian is required to look after all the horses in this department as in others. Besides looking after the District horses he is liable to be called upon at any time in case of infectious diseases among animals. He has to examine and report upon a large number of horses offered for sale to the District of Columbia, and upon his ability and honesty depend largely the real value of the animals secured for the District.

The pay of this official, $400 per year, is not at all adequate to the duties which he has to perform and the responsibility resting upon him. If the District is to have and retain the services of a skilled, careful, and trustworthy man the pay must be increased, and I so recommend.

PROPERTY DIVISION.

During the year 1888-'89 the property division was not under the engineer department.

Upon the accession of the present board of Commissioners it was transferred to the engineer department and placed under my general supervision. The business of the office has increased with the growth of the city and larger appropriations, so that it has been found necessary to employ a special inspector to look after the property interests of the engineer department, the reception, storage, care, and issuing

of all material used in the construction of streets and sewers, and the general charge of property yards, horses, wagons, etc.

PROPERTY YARDS.

In conducting the engineering work of the District there is absolute necessity for storage grounds in various sections. New materials, as curb, granite blocks, asphalt blocks, and tiles, sewer pipe, water pipe, cement, sand, broken stone, etc., have to be received, inspected, stored, and cared for until used. Old material taken from one street has to be stored and worked over to fit it for use in some other location. Most of the material is very heavy and bulky, and can not be hauled long distances without great expense. Hitherto convenient storage grounds have been found in unimproved public parks and streets, but the growth of the city renders it no longer possible to use these without interference with private and public interests.

It would be decidedly advantageous and business-like for the District to own property yards in different sections of the city and county.

CHANGE OF FISCAL YEAR.

It would be a decided advantage, in the administration of the affairs of this department, if the fiscal year could be changed to correspond with the calendar year. Each alternate year the annual appropriations are not ordinarily made until some time in August, and the other years, although made earlier, are not available until July. The consequence is that the working season is seriously broken in upon and work is rendered impossible during a considerable portion of the year best fitted for doing out-door work. If appropriations were made available always on January 1 the winter and early spring could be spent in preparing plans, making contracts, surveys, etc., and the entire summer season could be devoted to the active prosecution of the work.

This change would, I have no doubt, be of advantage in other departments of the District government, and I recommend that efforts be made to secure legislation to this end.

SURVEYOR'S OFFICE.

The present system of conducting this office is far from satisfactory, and a proper regard for the interest of citizens whose property is invested in realty demands that there should be a change.

The unsatisfactory conditions do not arise from any lack of ability, energy, or honor on the part of Mr. Forsyth, the surveyor, but are due to impersonal causes, chief among them being the fact that the office is supported by fees, which do not amount to enough to pay the running expenses of the office, give fair compensation to the surveyor and his assistants, and properly keep and guard the records of the office. The surveyor is the official custodian of the records of all the land surveys, from the earliest time to the present. These records, which are of inestimable value, are contained in volumes and files of papers, maps, etc. In many instances these records are old and dilapidated, and being constantly used, as they are, by title-searchers, are becoming so worn that their very existence is endangered. These old records, upon which the titles of all land in the District are based, should be copied, the copies be certified to, and used on all ordinary occasions, and the old originals filed away in the most secure fire-proof room obtainable,

only to be taken out when absolutely necessary in cases of litigation. There are many of the current records of the office which should be duplicated and stored away in some other locality, where one copy would be safe in case the other was destroyed. There are also many old records which are not properly cared for or properly indexed, and there is no place for this to be done. In this connection I desire to call attention to the fact that there is not a city or hamlet of any considerable magnitude whose land-record office is so illy provided for as that of the District of Columbia. The terrible loss and enormous litigation entailed upon the property-holders of the cities of Portland and Chicago, resulting from the destruction of their land records by fire, admonishes those in authority in this District to at least lay before Congress the great importance of providing adequate facilities for the transaction of business connected with such a department and the duplication of its records.

The consequences of the loss of the records of the surveyor's office would be so appalling that in any case and under any consideration I would recommend an appropriation of $5,000 for copying and duplicating the most valuable records, and for providing storage and indexing the records of the office. The receipts of the office, according to the showing of Mr. Forsyth, are not sufficient to meet this expense.

I believe that I but voice the sentiment of everybody familiar with the subject, and who have had occasion to do business with the office, that it would be far more satisfactory to all concerned if the surveyor was made a salaried officer of the District and the expenses of the office were provided for by regular annual appropriations, and all fees collected turned into the general revenues. In this manner the expenses of the office as an office of record could be properly met. There is no way under existing conditions of meeting these expenses.

The following estimate of the cost to properly equip and run the office on a salary basis, giving due recognition to its wants and justice to the public, is submitted.

SALARIES.

1 surveyor	$3,600
1 assistant surveyor	1,800
1 draughtsman and computer	1,500
1 clerk	1,400
1 messenger	600
4 rodmen, at $780	3,120
2 axmen, at $720	1,440
	13,460
Contingent expenses the first year would be large, to provide horses, wagons, and harness, the keeping of the same, new instruments, repairs to instruments, stationery, printing, etc	2,000
	15,460
Add the item previously mentioned for copying old records, mounting maps, books and plating, and providing proper storage	5,000
	20,460

This sum would put the office on a thoroughly satisfactory footing. After the first year the expense would be reduced to the salary roll and about $800 for contingent expenses.

I earnestly recommend that the change in the status of the surveyor's office, outlined above, be made if the necessary legislation and appropriation can be secured.

IMPROVEMENT OF ROCK CREEK.

I again invite attention to the desirability of improving Rock Creek, within the city limits, by arching it in and taking it through a tunnel, as proposed in my last annual report. If the work can not be undertaken in its entirety under an appropriation of the total estimated cost of $660,000, it is suggested that an appropriation of a part of this sum, say $100,000 or $150,000, be obtained, if possible, to commence the work. This would enable the creek to be arched in in the vicinity of N street, in Washington, and Dunbarton and Gay streets, in Georgetown, and the valley at this locality be filled up, and furnish thus the necessary crossing (for which the citizens of Georgetown have asked that a bridge be constructed), and also furnish a very much needed dumping-ground.

EXTENSION OF THE CITY.

The city of Washington was laid off about the year 1795, under the direction of George Washington, on a plan unsurpassed in any city of the world. Enough land was laid out into streets and squares to provide for the growth of the city for a great many years.

Doubtless if the imagination of Washington ever carried him into the distant future, when the capital of his country should outgrow the bounds which he himself had set, he comforted himself with the thought that the then rulers of the city would require all extensions thereof to conform to the same grand plan which he had established, and make a harmonious whole of the capital city, no matter how large it might ever become.

It is only necessary to look at a map of the District to see how this trust has been betrayed and the plan of the city mutilated almost beyond redemption through the neglect and short-sightedness of those who have had charge of it in recent years.

The city kept within its bounds until about the year 1866, when three large tracts of land north of the city, known as Meridian Hill, Mount Pleasant, and Todd and Brown's, each comprising about 100 acres, were platted, and it seemed to be the object of the owners to not only ignore the plan of the city of Washington, but to have as few streets as possible and these as narrow as they could well be made, being subject only to the caprice of the owners. From that time to the year 1888 owners of tracts, large and small, continued to mutilate and butcher the plan of this beautiful city without an effective finger being raised by Congress or the District or city authorities to prevent this great crime. Up to August 27, 1888, about 900 acres of land lying directly to the north of the city had been platted and subdivided by the owners thereof, and, strange to say, in all this large area not one street was laid out in conformity with the plan of the city.

This great evil having been brought to the attention of Congress, an act was passed and approved by the President August 27, 1888, requiring all future subdivisions of land to be in conformity with the plan of the city, and giving to the Commissioners power to make regulations governing subdivisions.

This law will largely prevent any further desecration, but will not remedy the evils already done, as it does not provide for the correction and rectification of the existing subdivisions lying along the city borders.

There is probably no subject connected with the welfare and great destiny of this District of more vital importance, or which deserves

more the careful, earnest, and immediate attention of Congress, than this subject of the correction of existing subdivisions and the extension of the city streets therein.

The present condition of affairs is fraught with many evils of an immediately tangible character, as with the present uncertain and rambling character of the streets it is impossible to lay out proper and satisfactory systems of street improvements, sewerage, water supply, gas service, etc., and some of the streets are not wide enough for roadways and sidewalks, and no proper connection through this intervening region can be made between the city streets and the property lately subdivided in conformity with the plan of the city.

There is a heavy cloud resting on all this badly platted region, as all recognize the paramount importance of a change, and feel confident that sooner or later the change will be made. This cloud prevents many people from buying property and building houses in the region, as they can feel no security that they will not be disturbed.

Property-owners will welcome the day when Congress takes the necessary action to settle the status of the streets of the region.

The city suffers also from this state of affairs owing to the large revenue which it is deprived of by reason of the comparatively low assessments resulting from the cloud on the property.

Congress has had this subject before it for several years.

April 20, 1886, Senator Mahone introduced a bill having this object in view, within a limited area, and providing means and machinery for accomplishing it. August 4, 1886, the Senate called upon the Commissioners to state the estimated cost of extending the streets and avenues in accordance with the bill and to report the best plan for such extension in regard to the angles of streets and contour of the ground.

The answer of the Commissioners is printed in Senate Mis. Doc. No. 44, Forty-ninth Congress, second session, and its accompanying map.

Last year another carefully drawn bill was introduced having the same object in view, but its passage was not effected. Every year adds so largely to the expense and difficulty of settling this vexed question, and all public and private interests call so loudly upon Congress to act in the matter, that it is earnestly hoped and strongly recommended that every effort be made to procure the necessary legislation.

If managed with wise discretion and benefits and damages properly considered, the expenses of the replatting, upon satisfactory lines, will not be enormously expensive to the public Treasury. Many streets, although not in conformity with the plan of the city, could be very well left as they are, being only of local importance.

The great expense would be in providing for the great thoroughfares and avenues traversing the northern region and the connections between isolated streets. Also wherever subdivisions are not built upon enough to cause too great an expense they should be entirely wiped out and new ones made. This can be done in several cases with great advantage to the property itself.

The principal streets to be considered in planning the extension are:

(1) Sixteenth street or Meridian avenue, which should be extended full width in a direct line to Piney Branch by condemnation. Beyond Piney Branch it can be provided for whenever the land is subdivided.

(2) New Hampshire avenue from Rock Creek Church road to Whitney avenue, and the widening of the latter to Fourteenth street extended, and its extension to Sixteenth street or Meridian avenue.

(3) The extension of New Jersey avenue to Piney Branch.

(4) The extension of Vermont avenue to Seventh street, where it should also intersect with New Jersey avenue.

(5) Rhode Island avenue should be extended through the corner of Le Droit Park; beyond the park it can be provided for in all new subdivisions.

(6) The extension of Michigan avenue through a corner of Brookland; beyond it can be provided for in new subdivisions.

(7) The widening of Sherman avenue, and its proper connection at Grant avenue and the Boundary with the city streets.

(8) The extension of Twelfth street from the Boundary to Spring road.

These are the main and most costly items for the extension of main urban streets through existing subdivisions.

Other expenses would attend upon the wiping out of some of the existing subdivisions not much improved, and upon the condemnation necessary to connect existing streets so as to make continuous thoroughfares.

I would recommend that a million dollars be appropriated for these extensions and connections under some such general provisions as those mentioned in the bill introduced last year.

The law of August 27, 1888, prohibits the recording of any subdivisions unless made in conformity with the plan of the city. This law was without doubt intended to fully and completely prevent any such subdivisions being made, but it does not fully accomplish the object sought. There is nothing to prevent parties making an improper subdivision and selling lots therein by metes and bounds instead of by reference to a recorded subdivision.

This has been done, and unless means are taken to prevent it, there will be isolated cases where lands will be improperly subdivided and breaks in the continuity of the city plans will occur.

To remedy this evil, it is suggested that legislation be secured forbidding the recorder of deeds from recording any deed of trust or deed of transfer, or any papers of similar import, unless satisfactory evidence is produced to show that the land in question is properly recorded, as deeded, in the office of the surveyor of the District of Columbia.

STREET NAMES.

Until the enactment of the law of August 27, 1888, governing subdivisions and the promulgation of the regulations provided for therein, the naming of new streets had been allowed to proceed without any system, and the consequence is that throughout the District there exists a wilderness of names which need correction. In some instances the same name is applied to highways in different portions of the District, while in others different portions of the same highway have different names.

A few instances will illustrate the facts above mentioned and the necessity for their correction.

The name Brown is applied to two different streets in the county and to nine different alleys and courts in different parts of the city.

Carrol designates a small street in southeast Washington as well as an alley in the same section, a so-styled avenue in the southwest, and another so-called avenue in Takoma Park.

The name Cedar designates two streets in the northwest, a road in the county, and alleys and courts in different parts of the city.

There are four Central avenues in the county.

There is a Chestnut street in Anacostia and in the northwest, and a Chestnut avenue in Takoma Park.

The name Columbia designates a road and a so-called avenue in the county and a street and terrace in the northwest.

There are numerous other duplications, notably, Franklin, Garfield, Grant (five streets, avenues, places, etc.); Hamilton, Howard, Jackson, Jefferson, Johnson, Kingman, Lincoln, Linden, Madison, (six streets, avenues, etc.); Park (eight streets, roads, etc.); Pierce, Oak, Pleasant, Prospect, School, Scott, Sheridan, Sherman, Summit, Sumner, Washington, etc.

One small east and west street in the northwest, between S and T, rejoices in the names of Cedar street, Oregon avenue, Swan street, Pierce street; and further, on with a break of a few blocks, Westminster street; Sherman street is a continuation of Corcoran street, and on the same line with Hillyer Place, one block away.

North of the city, Euclid, Roanoke, and Irving streets are practically one line; so are Yale and Bismark, Kenesaw and Wallach, Kenyon and Marshall, etc.

The names of Oregon and California, which should be applied to grand broad avenues, are applied to insignificant narrow streets.

The highway which encircles the city proper on the north, known as Boundary street, and which extends from Fifteenth street east to Twenty-second street west, is the old boundary of the city. This street is in the shape of a sickle with its handle. The name is objectionable because it conveys the impression that with this street the city or the District ends, whereas in fact the city has extended beyond this street, and a large portion lies beyond it. There are two parts of Boundary street where the numbers of the houses are the same, due to the crookedness of the portion lying between Ninth and Twenty-second streets west, and this duplication of numbers causes great annoyance and repeated complaints.

A glance at the map will show that this street could, with propriety, be divided into three portions, namely:

(1) The straight portion from Fifteenth street east to Ninth street west.

(2) The portion from Ninth street west to Tenth street west; and

(3) The portion from Tenth street west to Twenty-second street west.

These portions could be assigned different names and be considered among the avenues of the District.

In pursuance of the authority granted in the act of August 27, 1888, the Commissioners control the naming of all new streets and avenues, and a general scheme for naming new streets, avenues, etc., laid out in accordance with the plan of the city, has been adopted.

This scheme is as follows:—

(1) Streets running north and south and forming part of the regular rectangular plan of the city will be numbered in extension of the present numbered streets east and west of the meridian of the Capitol.

(2) Streets running east and west and lying directly north of the lettered streets will be named for the principal cities of America whose names commence with the letters of the alphabet in proper rotation.

The names selected are—

Albany.
Baltimore.
Cincinnati.
Detroit.
Emporia.
Frankfort.
Galveston.
Hartford.
Indianapolis.
Joliet.
Keokuk.
Lowell.
Milwaukee.
Newark.
Omaha.
Philadelphia.
Quincy.
Richmond.
Savannah.
Trenton.
Utica.
Vallejo.
Wilmington.
Xenia.
Yuma.
Zanesville.

MAP
OF THE
CITY OF WASHINGTON

"High Water Line" June 2nd 1889.

D C51 1

Photo Lithographer Washington, D.C.

the region lying along the open James Creek Canal. The streets in this region are mostly unimproved and the defect of too low an elevation can be corrected as the streets are finally and permanently improved. There are a few improved streets in the region which will have to be altered to bring all above flood-level. The second and most important section is that which starts at South Capitol street and extends westwardly, taking in a part of Pennsylvania avenue and a large part of the area between the avenue and the mall and across the Monument Grounds to the river. This is a naturally low-lying region through which ran the old canal. The experience of later years shows that the early engineers who had charge of such matters made a mistake in adopting too low elevations for the streets of this region when the canal was abandoned and filled up. During the flood the depth of water in the built-up area from South Capitol to Fifteenth street was in places as much as 4.2 feet. This region, subject as it is to periodical floods, is rendered unattractive and unhealthy. Property, although practically in the heart of the city, is low in value. The erection of fine buildings is not encouraged and the region is the home of the dissolute and the wretched, the abode of prostitutes, drunkards, and criminals. Washington should not have such a region within its borders, and especially should it not have such a region situated where it is, in what should be the most attractive and valuable portion of the city. It should be reclaimed at whatever cost.

Two general methods of preventing the recurrence of these floods have been suggested. One is to build an embankment along the river front of sufficient height to keep out the water. To render this effective all sewers leading to the river would require to have back-water valves, which would prevent the high water of the river backing up in them. These back-water valves would be difficult of construction in the large sewers, and as they would be used so seldom it would be more than probable that some of them would be out of order when the crucial test came. Besides this, it is readily seen that if, as is most likely to be the case, a local storm accompanied the flood, the sewers having their outlets closed would soon fill and overflow into the low area, and the old condition would be repeated in an aggravated manner, for the flood-water, instead of being back-water from the river, would be sewerage and the drainings from the streets.

Even this difficulty could be overcome by having in this contingency large pumping stations ready to pump the sewerage, etc., beyond the back-water valves out into the river. But this machinery would be enormously expensive, its maintenance would also be expensive, and as it would be used only at rare intervals its proper and effective operation at the time of the flood would be far from certain.

This scheme has so many contingencies in it as to render it impracticable. The alternate method of preventing the recurrence of the floods is to raise all the flooded area to such an elevation that the waters can not reach it. This is the best method, the only absolute and safe course to pursue. The cost of this work would be large, but the good name and health of the city demand that it should be done, and the property in the region would be very greatly enhanced in value as soon as the work was completed. How this cost should be met if the work was undertaken and how divided I do not feel called upon to consider. Certainly the general revenues should pay for the necessary work in streets, avenues, and all public spaces.

I have had an estimate made of the cost of the work which I give herewith. The first estimate is for the work necessary in the public streets, avenues, alleys, and reservations in the main area, including

Pennsylvania avenue within its limits. In making this estimate it is planned to raise every part of the streets, etc., to an elevation of at least 12 feet above mean high tide, 1 foot above the highest known level of the waters. To attain this elevation as a minimum some parts will have to be raised slightly more to get effective longitudinal surface drainage. The estimate includes taking up and resetting all curb; taking up and relaying with new and old bricks all existing brick sidewalks, and of replacing all improved sidewalks with those of equal character; taking up and relaying all granite block pavements; taking up and replacing with asphalt pavement all cobble-stone pavements in streets and laying asphalt pavements wherever they or coal-tar pavements now exist; laying asphalt block pavements in alleys and the necessary work of filling to bring the areas up to the proper grade.

This last is the main item of the estimate, involving, as it does, the supplying of nearly a million and a half cubic yards of earth. This would in all probability have to be brought from across the river in Virginia by rail.

ESTIMATED COST OF RAISING FLOODED AREA.

Pennsylvania avenue district.

72,925 feet curb taken up and reset, at 30 cents	$21,877.50
155,574 square yards brick sidewalk taken up and relaid, at 40 cents	60,629.60
4,000 square yards improved sidewalks, mostly granolithic, at $3.15	12,600.00
2,000,000 new brick, at $10	20,000.00
72,130 square yards granite block pavement taken up and relaid, at $1.50	108,195.00
99,965 square yards asphalt pavement in place of sheet pavements now existing, at $2.25	224,991.00
56,345 square yards asphalt to replace cobble pavement, at $2.25	127,776.25
56,345 square yards cobble taken up and hauled away, at 15 cents	8,451.75
25,000 square yards cobble removed from alleys and hauled away	3,750.00
25,000 square yards asphalt block pavement in alleys, at $2.25	56,250.00
1,309,506 cubic yards filling, at 50 cents	654,753.00
Incidental work, such as changing gas lamps, new sewer traps and manholes, new water boxes, raising sewer and water construction to new grade, removing and replanting trees, necessary changes in police and fire department apparatus, fixing vaults, rebuilding gravel roads in parks, etc	200,000.00
	1,499,274.10
Contingencies, inspection, engineering, etc., 10 per cent	149,927.40
	1,649,201.50

In making such a change of grade the railroad companies, gas company, electric-light company, etc., would of course be expected to make the necessary changes in their appliances. The filling of private property need not follow immediately upon the filling of the streets, but could come along gradually as the property was improved.

James Creek Canal district (estimate).

29,028 feet curb taken up and reset, at 30 cents	$8,708.40
69,339 square yards brick sidewalk taken up and relaid, at 40 cents	27,735.60
1,000,000 new brick, at $10	10,000.00
21,400 square yards granite-block pavement taken up and relaid, at $1.50	32,100.00
1,547 square yards asphalt-block pavement taken up and relaid, at $1	1,547.00
2,140 square yards asphalt pavement to replace present sheet pavement, at $2.25	4,815.00
10,805 square yards cobble taken up and hauled away, at 15 cents	1,620.00
10,805 square yards asphalt pavement in place of cobble, at $2.25	24,311.25
373,765 cubic yards filling, at 50 cents	186,882.50
Incidentals as mentioned in Pennsylvania avenue district estimate	40,000.00
	337,720.50
Engineering, inspection, and contingencies, 10 per cent	33,772.05
	371,492.55

It is not at all essential that this work should go on in a connected way like the work in the Pennsylvania Avenue district. One hundred thousand dollars would make the needed changes in all improved streets and the remaining work could follow gradually.

CARRIAGE STEPS.

Owing to numerous complaints against them, and a knowledge of numerous accidents caused by them, an investigation into the subject of carriage blocks on the public streets was undertaken last spring. It was found that while undoubtedly useful, in a few instances, that in the great majority of cases they were and are of no use at all, as modern carriages are nearly all hung so low that their steps are but a few inches above the curb. Observation showed that where these blocks are in place they are rarely used, occupants of carriages preferring to get out on the pavement at some other locality than that occupied by the block. So numerous were the accidents to carriages by the breaking off of doors against the blocks that many drivers of public and private carriages were instructed to avoid them.

These carriage steps are undoubtedly dangerous to pedestrians, particularly on streets without a row of trees along the curb. Many of them are very unsightly, being irregular, undressed blocks of stone, and in a large number of instances being the old blocks used to span the gutters of unpaved streets. The emplacement of these blocks in the streets seemed to me to be in direct violation of the law, and this view was concurred in by the attorney of the District, to whom the subject was referred. Correspondence with the authorities of other cities showed that in some cities they were absolutely prohibited, and that efforts were being made in others to abolish them, and that their retention was no longer necessary or desirable.

The Board of Commissioners, after full consideration, issued an order on May 18, 1889, ordering the removal of carriage-blocks from the public streets.

This order immediately called forth numerous protests from those who considered their comfort and vested interests interfered with, and the new Board of Commissioners, on June 10, 1889, revoked the order and required that all future carriage-blocks should conform to the dimensions specified in the building regulations.

ROCK CREEK NATIONAL PARK.

There lies within the District of Columbia a region of marvelous natural beauty, a region of rugged rocks, running water, and stately trees; of lovely, deep, and shady valleys; steep forest covered slopes, and rolling sunny uplands. This region, yet largely in a state of nature and lying just beyond the present city limits, seems specially designed by the Creator for the recreation grounds of this large and rapidly growing city, and set deeply in the hearts of all citizens of Washington worthy of the name is the desire that it may be secured to them and all who come after them for a grand public park.

For more than twenty years attempts have been made to establish a public park in this region and the matter has been brought to Congress in various shapes as "Sites for a Public Park and a Presidential Mansion," "Rock Creek Park," "Zoological Garden," etc.

The earliest data regarding these matters now at hand is what is known as Senate bill 549, Thirty-ninth Congress. Upon this bill Major

N. Michler, U. S. Army, made a full and completé report to the Senate, January 29, 1867, and from which I quote:

* * * * * * *

In the first place, let me consider the subject of a public park. Where so much has been written on so interesting a feature to any large city as that of a park, and where the necessity of public grounds, either for the sake of healthful recreation and exercise for all classes of society or for the gratification of their tastes, whether for pleasure or curiosity, has become apparent to every enlightened community, it would seem to be unnecessary for me to dilate further upon the matter, to say nothing of the natural or artificial beauties which adorn a park and so cultivate an appreciative and refined taste in those who seek its shades for the purpose of breathing the free air of heaven and admiring nature. It is certainly the most economical and practical means of providing all—old and young, rich and poor—with the greatest of all needs—healthy exercise in the open country.

To accomplish these ends there should be a spaciousness in the extent of the grounds, not merely presenting the appearance of a large domain, but in reality possessing many miles of drives and rides and walks, all independent of each other, and either open or protected, so as to be suitable for the different seasons. There should be a variety of scenery, a happy combination of the beautiful and picturesque, the smooth plateau and the gently undulating glade vieing with the ruggedness of the rocky ravine and the fertile valley, the thickly mantled primeval forest contrasting with the green lawn, grand old trees with flowering shrubs. Wild, bold, rapid streams, coursing their way along the entire length and breadth of such a scene, would not only lend enchantment to the view, but add to the capabilities of adornment. While nature lavishly offers a succession of falls, cascades, and rapids to greet the eye, as the waters dash through some romantic dale, the hand of art can be used to transform them into ponds and lakes as they gently glide through the more peaceful valleys, thereby rendering them the means of pleasure and recreation for boating or skating. What so useful as an abundance of water or so ornamental when converted into fountains and jets to cool the heated atmosphere? It furnishes, also, opportunities for the engineer and artist to display their taste in constructing ornamental and rustic bridges to span the stream.

An attempt has been made in a few words to describe the purposes and beauties of a public park. In no place has nature been more bountiful of her charms than in the vicinity of this city, and all can be found so near and accessible. The valley of the Rock Creek and its tributaries, the Broad and Piney branches, and the several minor rivulets, with the adjoining hills overlooking these beautiful streams, present the capital of the nation advantages not to be lightly disregarded in providing a park worthy a great people. All the elements which constitute a public resort of the kind can be found in this wild and romantic tract of country. With its charming drives and walks, its hills and dales, its pleasant valleys and deep ravines, its primeval forests and cultivated fields, its running waters, its rocks clothed with rich ferns and mosses, its repose and tranquillity, its light and shade, its ever-varying shrubbery, its beautiful and extensive views, the locality is already possessed with all the features necessary for the object in view. There you can find nature diversified in almost every hue and form, needing but the taste of the artist and the skill of the engineer to enhance its beauty and usefulness; gentle pruning and removing what may be distasteful; improving the roads and paths and the construction of new ones, and increasing the already large growth of trees and shrubs, deciduous and evergreen, by adding to them those of other climes and countries.

* * * * * * *

The valley of Rock Creek occupies a central position to both Washington and Georgetown, as it lies between the Tennallytown road on the west, one of the most prominent thoroughfares leading out of the city, and the Fourteenth street road and Seventh street turnpike on the east, two of the finest communications, running in a northerly direction from each other. From these main highways many branches cross the valleys or follow along the banks of the stream. These transverse roads already form beautiful drives. Rock Creek winds along for more than 4 miles through the center of the proposed grounds, receiving at convenient points the waters of the Broad and Piney branches and several smaller tributaries. For a short distance it courses through a narrow but beautiful valley; then wildly dashes for a mile over a succession of falls and rapids, with a descent of some 8 feet, the banks on both sides being bold, rocky, and picturesque; then passes again through narrow valleys or between high, bluff banks. At many points the creek is capable of being dammed, thus forming a series of lakes and ponds for useful and ornamental purposes. The many deep ravines setting in towards it can furnish romantic walks and quiet retreats for the pedestrian. The larger part of the ground is thickly wooded and capable of great adornment. Here we find the several varieties of oak, the beech, the locust, the mulberry, the hickory, the sassafras, the persimmon, the dogwood, the

pine, with a great many shrubs, vines, and creepers growing, climbing, and trailing through the woods. Beautiful vistas, artistically arranged, can be cut through them, exhibiting distant points of landscape, while charming promenades invite the wanderer to seek cooling shades. Nature has been so rich in her vegetable creation that the plan of transplanting trees of large growth which has been adopted in most of the modern parks will be unnecessary.

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Back from the stream some level plateaus extend, which can be appropriately employed for zoological and botanical gardens, grounds for play and parade, and many other useful purposes.

* * * * * * *

The lay of the land is such that it admits of thorough drainage, and the nature of the soil offers all the facilities for building good roads; the granite and limestone rocks which are found outcropping at different points will furnish material for their superstructure. In fact, every facility is offered for laying out and constructing a grand national park.

Accompanying this report were surveys and maps showing localities in great detail.

On the 19th day of February following, Senator B. Gratz Brown called up the bill (S. 549), as will be seen by reference to the Congressional Globe, part 3, second session, Thirty-ninth Congress, 1866–'67, to which the attention of Congress is urgently invited.

In the year 1883 three of the most prominent citizens of the District addressed the following to the Commissioners of the District, and I insert it in my report as having direct and forcible bearing upon this subject:

NOVEMBER 17, 1883.

To the Honorable the Commissioners of the District of Columbia:

The undersigned, acting for themselves and, as they believe, representing the wishes of a very large portion of the citizens of Washington, beg leave to submit the following for your favorable consideration:

On the 18th day of July, 1866, on motion of the honorable Mr. Hendricks, the Senate of the United States unanimously adopted a resolution instructing its Committee on Public Buildings and Grounds to inquire for a suitable site for a public park and also a suitable site for a Presidential mansion, combining convenience of access and healthfulness, good water, and capability of adornment, and empowering the committee to employ an army engineer to make the necessary investigations. In pursuance of this direction and authority the committee selected Maj. N. Michler, of the Corps of Engineers, who was detailed for the purpose by the Chief of Engineers, with the consent of the General-in Chief. Major Michler entered upon the discharge of the duty assigned to him, and on the 16th of January, 1867, submitted his report to the committee. The report is on file (Mis. Doc. No. 21 of the second session of the Thirty-Ninth Congress), the whole of which we commend to your consideration, together with the map accompanying it. The committee approved Major Michler's report and presented a bill for the purchase or condemnation of the lands surveyed and dedicated on the map as a park, but no action was taken upon the bill (Senate bill 549). By examining the bill and the report you will observe that it proposed and strongly recommended for the park the lands along Rock Creek and its branches, including the valley of the creek and the adjacent hills and plateaus on each side thereof, extending a distance up the creek of between 2 and 3 miles.

The quantity of land proposed to be taken Major Michler estimated at about 2,540 acres; but he also marked a second series of lines for grounds of more moderate dimensions, including about 1,800 acres. The report set forth at considerable length the remarkable adaptation of the grounds for a public park, their great natural beauty, their capability of adornment, and their accessibility to both Washington and Georgetown.

The undersigned are profoundly impressed by the desirability and policy of securing these grounds for a public park without needless delay. Washington is now and it is ever to be a city of residences. It is already inviting to the best classes of citizens in all parts of the country, who are flocking hither in considerable numbers to make this their permanent home. Everything that adds to the city's attractions, that renders life here more agreeable, seems to us to be worthy of attention and to be secured, if practicable; that a large park, including Rock Creek and its adjacent hills and woods, would be a great additional attraction, affording, as it would, charming drives and walks, with constantly varying and beautiful scenery, no one can doubt. The experience of other cities has shown this. What has not Central Park done for

New York, Fairmount Park for Philadelphia, and Druid Hill for Baltimore? They have greatly increased the value of property in those cities and stimulated the influx of wealth and population. We believe that the procurement of the proposed Rock Creek Park would have a like beneficial influence upon the future of our city, greater even in degree, when it be considered that this is to be a city of homes.

It would doubtless add to the value of property in all parts of the city and immensely to the value of the naval property adjacent to or near the exterior lines of the park. We do not, however, propose to describe at length the benefits that would result from the acquisition and establishment of the park. They must be apparent to your honorable body, sufficiently so as to demonstrate the wisdom of making an early effort to secure them.

It is believed that the title to the lands needed can now be obtained at a reasonable cost, much less than would be required some years hence, and, in the aggregate, imposing no considerable burden upon the city's resources. A large part of the grounds needed, though admirable for a public park, is worthless for agricultural or building uses, and most of it is undesirable for residences, in its present condition; but the establishment of the park would add greatly to the value of the lands surrounding it, would make them very desirable for rural residences, and, in fact, would prove a bonus to the owners of such surroundings. It may be presumed, therefore, they would sell to the city such portions of their lands as may be included in the park, for a very moderate price, or even donate them, as has been done in some cases elsewhere. It is also a consideration of much weight that whatever money is needed for the acquisition of this title can now readily be obtained at a very low rate of interest—a rate not exceeding 3 per cent.—and, if we are not mistaken in our convictions, the increased value of the property in the city caused by the establishment of the park and the consequent increase of revenue will more than counterbalance the interest on the cost.

In view of these considerations, the undersigned respectfully request your honorable board to make application to Congress at its coming session for authority to acquire the title to the lands described for a public national park; and they will ever pray, etc.

W. W. CORCORAN.
W. STRONG.
JOSIAH DENT.

From this time forward there appears to have been but little done in the matter of a public park until the incoming of the Forty-ninth Congress, when the following act was passed by the Senate:

[In the House of Representatives. July 23, 1886, read twice and referred to the Committee on the District of Columbia. January 31, 1887, referred to the House Calendar and ordered to be printed.]

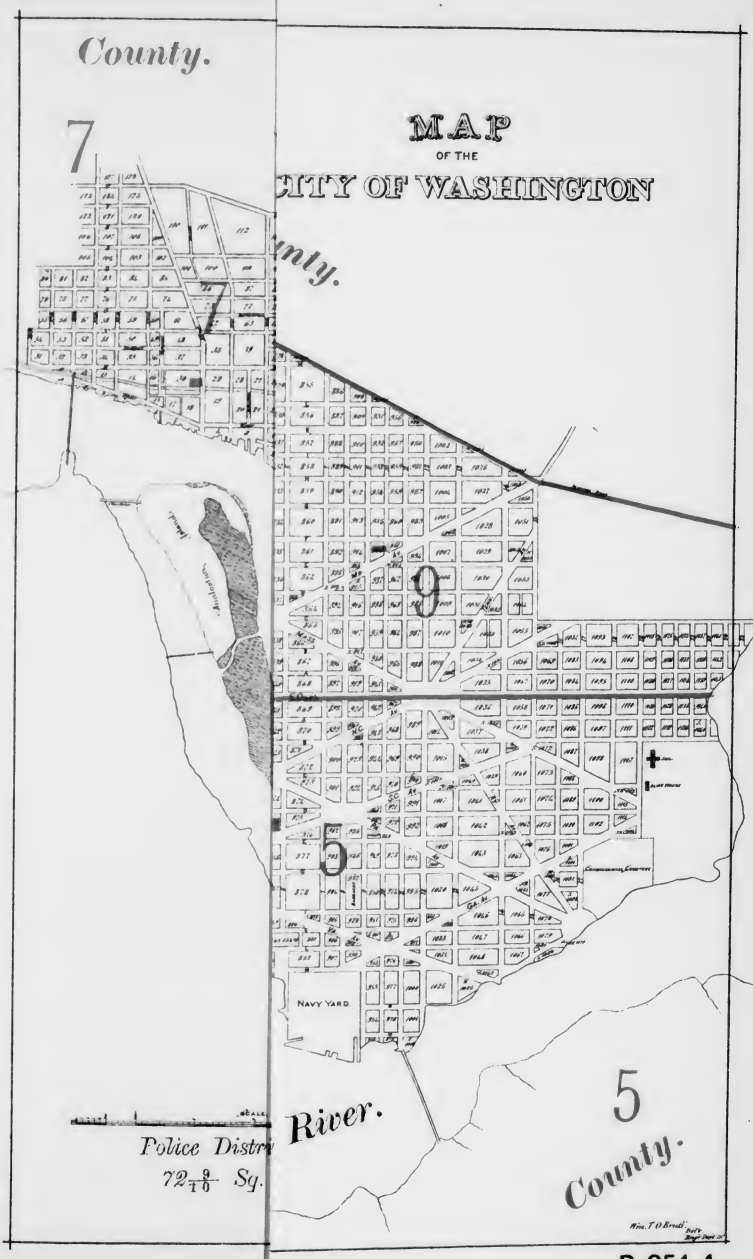
AN ACT to authorize the Commissioners of the District of Columbia to condemn land on Rock Creek for the purposes of a park, to be called Rock Creek Park.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Commissioners of the District of Columbia are hereby authorized and directed to survey and plat for condemnation a certain tract of land, not exceeding one thousand feet in width, lying and being adjacent to and on both sides of Rock Creek, in the District of Columbia, beginning at the intersection of Massachusetts avenue extended and Rock Creek, and extending all along the line of said Rock Creek to the boundary-line of the District of Columbia, and to survey and lay out the said land in the most practicable manner for a park, which shall become the property of the United States of America.

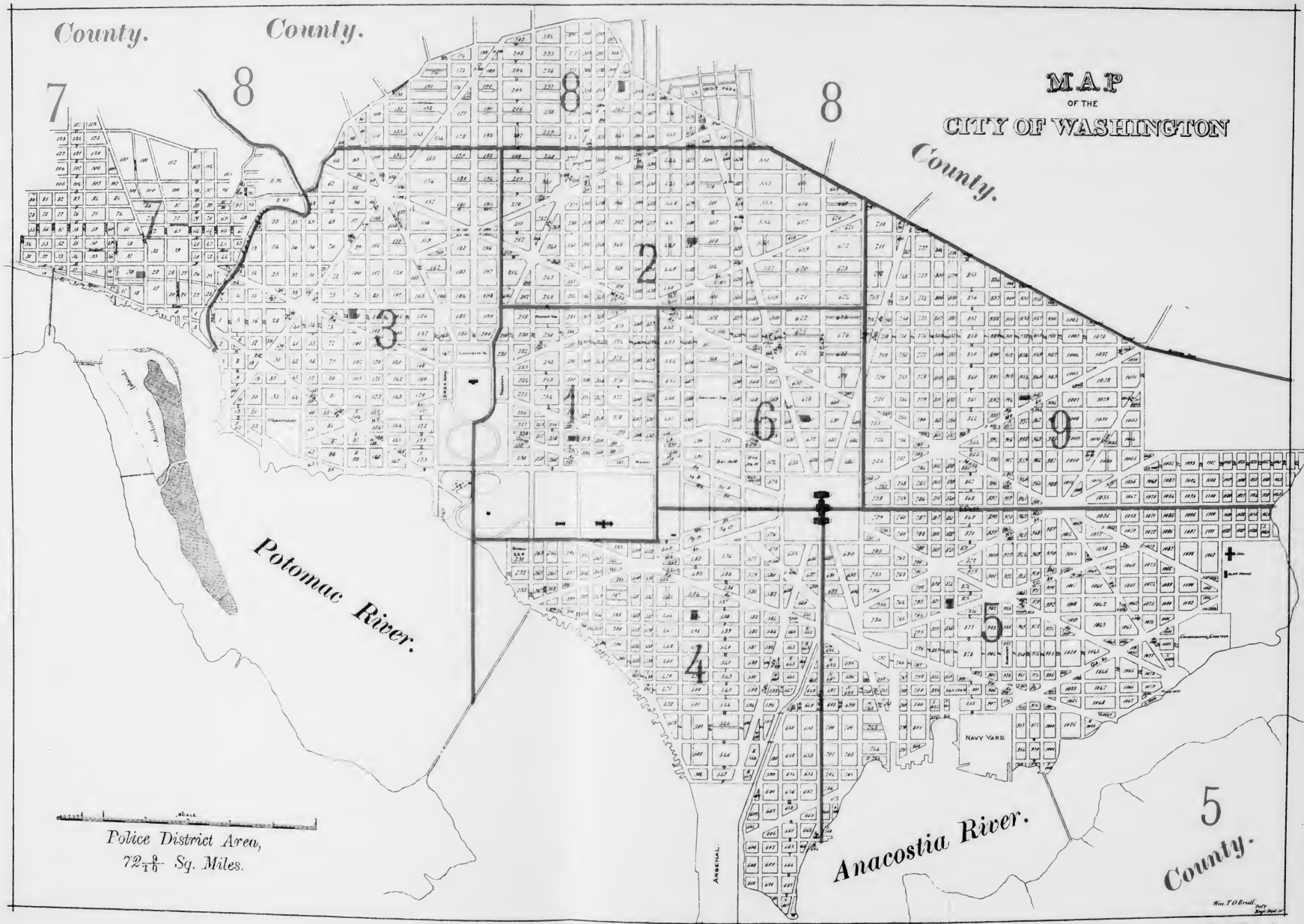
SEC. 2. That the Commissioners shall cause to be made a careful map showing the quantity and value of each parcel of private property to be taken for such purpose, with the names of the owners thereof, and the said map shall be filed and recorded in the public records of the District of Columbia; and from and after that date the several tracts and parcels of land embraced in such park shall be held as condemned for public uses, subject to the payment of just compensation therefor, to be ascertained as follows:

SEC. 3. That said Commissioners shall cause an appraisement of the value of the land so taken to be ascertained by an appraisement to be made by three judicious, disinterested freeholders of said District.

SEC. 4. That if said Commissioners shall be unable to purchase, at a reasonable price, any portion of the land so condemned, by agreement with the respective owners, within thirty days after such condemnation, they shall, at the expiration of such period of thirty days, make application to the supreme court of the District of Columbia, at a general or special term, by petition containing a particular description of the property required, with the name of the owner or owners thereof, and his, her, or their residence, as far as the same can be ascertained, which court is hereby authorized and required, upon such application, without delay, to ascertain and assess


County.
7
MAP
OF THE
CITY OF WASHINGTON
9
5
NAVY YARD
River.
5
County.
Police Distri
72 9/10 Sq.

D C51 1


County.
County.
7
8
8
8
County.
MAP
OF THE
CITY OF WASHINGTON
1
2
3
4
5
6
9
Potomac River.
Anacostia River.
NAVY YARD
ARSENAL
5
County.
Police District Area,
72 9/10 Sq. Miles.

D C51 1

the value of said land so taken, in the manner provided, with reference to the taking of land for highways in the District of Columbia.

SEC. 5. That the said Commissioners shall report to Congress their proceedings in such condemnation, and no money shall be paid in consequence thereof until an appropriation shall be made by Congress therefor.

Passed the Senate July 22, 1886.

Attest: ANSON G. MCCOOK, *Secretary.*

The committee to whom the bill was referred made a highly favorable report, and the Commissioners of the District, to whom the matter was also referred, concurred therein, under date of June 24, 1886.

The next effort in the direction of establishing a national park appears to be embodied in Senate bill 2752, April 23, 1888, introduced by Hon. Mr. Beck, and which is worthy of consideration, and which was attached to the sundry civil bill as an amendment thereto.

On December 21, 1888, Senate bill No. 3757 was introduced by Mr. Morrill, which I append:

[In the Senate of the United States, December 21, 1888.]

Mr. Morrill introduced the following bill, which was read twice and referred to the Committee on Public Buildings and Grounds:

A BILL for the establishment of a zoological park in the District of Columbia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to establish a zoological park in the District of Columbia for the advancement of science and the instruction and recreation of the people, a commission shall be constituted, composed of three persons, namely, the Secretary of the Interior, the president of the Board of Commissioners of the District of Columbia, and the Secretary of the Smithsonian Institution, which shall be known and designated as the commission for the establishment of a zoological park.

SEC. 2. That the said commission is hereby authorized and directed to make an inspection of the country along Rock Creek, beginning at the point on that creek where the Woodley road crosses said creek and extending upward along its course to where said creek is crossed by the Klingle road, and to select from that district of country such a tract of land of not less than one hundred acres, which shall include a section of the creek, as said commission shall deem to be suitable and appropriate for a zoological park.

SEC. 3. That the said commission shall cause to be made a careful map of said zoological park, showing the location, quantity, and character of each parcel of private property to be taken for such purpose, with the names of the respective owners inscribed thereon, and the said map shall be filed and recorded in the public records of the District of Columbia; and from and after that date the several tracts and parcels of land embraced in such zoological parks shall be held as condemned for public uses, subject to the payment of just compensation, to be determined by the said commission and approved by the President of the United States: *Provided,* That such compensation be accepted by the owner or owners of the several parcels of land.

SEC. 4. That if the said commission shall be unable to purchase any portion of the land so selected and condemned within thirty days after such condemnation, by agreement with the respective owners, at the price approved by the President of the United States, it shall, at the expiration of such period of thirty days, make application to the supreme court of the District of Columbia, by petition, at a general or special term, for an assessment of the value of such land, and said petition shall contain a particular description of the property selected and condemned, with the name of the owner or owners thereof, and his, her, or their residences, as far as the same can be ascertained, together with a copy of the recorded map of the park; and the said court is hereby authorized and required, upon such application, without delay to notify the owners and occupants of the land and to ascertain and assess the value of the land so selected and condemned by appointing three commissioners to appraise the value or values thereof, and to return the appraisement to the court; and when the values of such land are thus ascertained said values shall be paid to the owner or owners and the United States shall be deemed to have a valid title to said lands.

SEC. 5. That when the said commission shall have obtained the land for a zoological park, as herein provided, it shall have power to lay out the same as a park and to erect such building or buildings thereon as may be necessary for the scientific purposes to which the park is dedicated and proper for the custody, care, and exhibition of a collection of animals.

SEC. 6. That when the said commission shall have established a zoological park in the District of Columbia under the provisions of this act, by acquiring the necessary lands and by laying out the same as a park and by the erection of the necessary buildings thereupon, it shall be the duty of said commission to turn over the said zoological park, with all its buildings and appurtenances, to the custody and care of the Regents of the Smithsonian Institution; and when such transfer of the custody and care of the zoological park shall be made the duties of said commission shall cease and its existence terminate.

SEC. 7. That when the said commission shall tender to the Regents of the Smithsonian Institution the care and custody of the zoological park provided for in this act, the Regents of the Smithsonian Institution are hereby authorized to assume the care and custody of the same, and the said Regents of the Smithsonian Institution are hereby authorized to make such rules and regulations for the management of the park, and of the property, appurtenances, and collections of the park, as they may deem necessary and wise to secure the use of the same for the advancement of science and the instruction and recreation of the people.

SEC. 8. That the said commission is hereby authorized to call upon the Director of the Geological Survey to make such surveys as may be necessary to carry into effect the provisions of this act; and the Director of the Geological Survey is hereby authorized and required to make such surveys under the direction of said commission.

SEC. 9. That for the purpose of carrying into effect the provisions of this act there is hereby appropriated, from any moneys in the Treasury not otherwise appropriated, the sum of two hundred thousand dollars.

Subsequently a large number of the most prominent citizens of the District met in mass meeting (January 11, 1889), and a permanent committee was appointed to represent the interests of the people in this important matter, and to urge upon Congress the passage of a bill looking to the condemnation of lands for the purposes indicated, and Hon. Mr. Hemphill introduced a bill (H. R. 12,136), upon which a favorable report was made, but which was not favorably acted upon because of the want of time for its proper consideration.

The present condition of the District of Columbia and its evident future admonish us that provision should at once be made for such a park as the population of a large and prosperous capital city demands.

The extraordinary natural beauty of the proposed park has this far been preserved, but its subdivision and the subdivision of portions of it would undoubtedly result in great injury in this direction.

Rock Creek drains a large section of the country and flows through the city of Washington. If residences should be placed along its banks the sewerage would be emptied into that stream and necessarily endanger the health of this city. The consequence would be either that this continuous risk must exist or that this picturesque creek must be covered and used exclusively as a sewer.

That portion of the creek along which dwelling houses have already been built is now an open sewer flowing through the city, from which disagreeable and noxious odors constantly rise, greatly to the detriment of the health of the people along its banks and to the injury of property in that section, and the time is near at hand when this portion of the creek must be covered over or some other mode of protection adopted, at a cost of many thousand dollars.

The preservation of both banks of Rock Creek will at once avoid this danger and cost and preserve the existing beauty of a large territory. Looking at this measure merely as a business matter, it seems to be wise. Such a preservation of the natural beauties of a section so near the city will conduce greatly to the physical as well as to the moral improvement of the people.

It is certainly the most economical and practicable means of providing all, old and young, rich and poor, with the greatest of all needs—healthy exercise in the open country.

Twenty years ago there were but two well-advanced rural parks in America. Now there are more than twenty. London, Paris, Brussels, and Liverpool have in the last twenty years more than doubled their recreation grounds. All the cities of the British Islands, thirty years since, possessed but four parks worthy of the name, and they now have thirty, as large in acreage as Franklin Park in Boston. During the last two years New York City, which has the costliest experience of any city in the world in this direction, has purchased lands for six additional parks, to contain 3,600 acres in all, and the State legislature, last winter, voted $12,000,000 for their purchase.

Chicago has six rural parks.

Baltimore paid $693,000 for Druid Hill Park and has several smaller parks.

Fairmount Park, Philadelphia, cost $6,300,000.

Central Park, New York, cost $6,253,000, and the city has 38 other parks. Prospect Park, Brooklyn, cost about $4,000,000.

St. Louis has a number of parks, the largest of which cost about $850,000.

Vienna has 8,000 acres of parks, Tokio 6,000, Berlin 5,000, and Dublin 1,900.

No city on the globe of equal importance is as badly provided as the city of Washington with large parks in its vicinity for the purposes of recreation, in which all classes, rich and poor alike, can spend leisure hours in summer amid inviting shade and fresh air.

The Soldiers' Home is only at times subject to public use, and never except upon its roadways, and can be used only through courtesy.

The ground for the use of a national park in this city can now be condemned at a reasonable cost, and prompt action will not only save many thousands of dollars, but prevent the destruction of the natural beauties of the country along Rock Creek, which are second to those of no other locality adjacent to any city in the world.

Looking to the city as it now is, and more particularly to the great future which is assured for it, a national park, which shall not only meet present requirements, but those of after years as well, is, in my opinion, one of its greatest needs. What is wanted to supplement and complete the series of small parks is a great one adjoining it, where the resident and the visitor can find wholesome attractions. Every consideration of economy, expediency, and sanitation demands the speedy settlement of this question. It will cost much less to acquire property now, and it is better suited for the purposes than it will be a few years hence, since the march of improvements in that direction is moving with rapid strides. The means of adorning such a park are at hand. The gardens and greenhouses, for supplying the public parks with plants and flowers, and the tree nurseries of the parking commission are in a condition to meet large demands upon them, even for a great national park, and I am informed that many public-spirited citizens of this and other cities stand ready to contribute liberally toward beautifying it with statuary, monuments, fountains, grottoes, etc., from their private means.

The capital of a great nation, where the population is increasing at a rate unprecedented from causes unusual in this country, stands among the cities having the least acreage of parks in proportion to population. Washington is the capital of 65,000,000 people and it must grow as the nation grows.

In 1892 we may have a legion of visitors from every civilized country of the world, and national pride should incite us to show them a national park at least equal to their own. The National Government

should advance whatever may be necessary to attain that end, leaving the re-imbursement to be gradually distributed among present and future tax-payers, and the latter would have the advantage of enjoying their park while contributing toward it in annual installments.

During the past year the city of New York borrowed $12,000,000 for the purchase of public parks and obtained the money at 2½ per cent. interest.

The park which should be purchased would probably cost about $2,500,000. This would take in the land along the banks of the creek clear to the District line, embracing about 2,500 acres. To pay for this park Congress should authorize the issuance of District of Columbia 3 per cent. bonds running fifty years with a proviso for redeeming one-fiftieth of them every year. These bonds could, without doubt, be sold at par.

The debt so incurred could be entirely eliminated, principal and interest, in the fifty years by the average annual payment of $87,500. This sum, even if borne entirely from the District revenues, would be insignificant in comparison to the benefits to be derived from its expenditure.

The history of other park enterprises shows that as soon as a park is an established fact all property in its vicinity rapidly increases in value. This is true generally, and will be true in this case to such an extent that the increased revenue properly derivable from taxation on neighboring property will fully equal if it does not exceed the annual outlay for paying for the park.

Regarded as a mere business proposition, irrespective of its enormous value in other respects, the National Rock Creek Park project must commend itself to all thoughtful citizens.

I very earnestly recommend that every possible effort be made to secure this park on the broadest and most liberal scale. Not less than $2,500,000 should be appropriated for the purpose, and this could be materially increased to the advantage of the District.

FINANCIAL.

In bringing forward in this report several projects outside of the ordinary routine of the department and involving the expenditure of large sums of money, it is not with any idea of being able to accomplish them by means of the immediate revenues of the District and at the expense of needed improvements of an ordinary nature. The cost should be provided in such a manner that those who come after us, and will reap the benefits, will pay their fair share. With money in the greatest abundance available at 2½ per cent. interest, the District should be placed in such a condition by our law-makers as to have the command of all the money needed for any purposes involving the welfare and the ultimate great destiny of this city.

In the lives of most, if not all, successful men of business there are times when extraordinary expenditures are required to be made in order that vital interests may be protected. As with individuals so with aggregations of individuals gathered in cities. To meet these extraordinary expenditures indebtedness must be incurred. To incur this indebtedness for laudable objects and under proper restrictions is wise, and to refuse or neglect to incur it is foolish.

To my mind the time is now at hand when the District of Columbia can with the highest wisdom incur a large indebtedness to carry out in the immediate future several projects of paramount importance to the

welfare of the District, which projects have been alluded to in this report.

They are, in brief, the extension of the city streets and avenues, and the rectification of improper subdivisions in the property laid out before the passage of the act of Congress of August 27, 1888; the condemnation of land for Rock Creek Park; the improvement of Rock Creek within the city limits, and the raising of the flooded area to bring it above the reach of floods. To carry out all these projects in a satisfactory manner, and to provide street improvements, sewerage, etc., actually needed in the different sections of the city, and which can not be provided for under ordinary routine conditions, would require something like $8,000,000 to $10,000,000, and I believe that the borrowing of this money and its expenditure at the present time for the above outlined objects would be the highest wisdom.

Very respectfully, your obedient servant,

THOMAS W. SYMONS,
Captain, Corps of Engineers.

Maj. C. W. RAYMOND,
Engineer Commissioner, District of Columbia.

B.—REPORT OF CAPT. JAMES L. LUSK, CORPS OF ENGINEERS, U. S. A., ASSISTANT TO THE ENGINEER COMMISSIONER OF THE DISTRICT OF COLUMBIA.

WASHINGTON, *November* 15, 1889.

SIR: I have the honor to report upon the operations for the fiscal year 1889 of the following-named branches of the Engineer Department:

The water, sewer, and street-lighting divisions, pumps and wells, the survey of the District, the office of the inspector of asphalt and cements, and the harbor-front. All of these were in my immediate charge during the whole of the fiscal year named, except the division of street-lighting, which was assigned to me on April 1, 1889.

WATER DIVISION.

For details of the operations of the distribution branch of this division reference is invited to the accompanying report of Superintendent H. F. Hayden. It will be seen that a total length of 67,932 feet of cast-iron pipe was laid, varying in size from 3 to 24 inches in diameter. This is about three times the aggregate laid during the year immediately preceding, and exceeds the number of feet laid in any year since 1872.

The following tables (1 and 2) summarize the operations of the year, and show the extent of the distribution system on June 30, 1889.

TABLE 1.

New mains laid.	Feet.	New mains laid.	Feet.
24 inches diameter	2,312	6 inches diameter	32,130
20 inches diameter	5,144	4 inches diameter	6,255
12 inches diameter	5,614	3 inches diameter	8,727
10 inches diameter	2,784	Mains lowered	3,674
Connections for fire hydrants, etc	1,313	Intersections laid	3,653

Valves changed to grade	13	Hydrants abandoned and removed	2
Valves repaired	61	Hydrants moved to curb	9
Fire hydrants erected	45	Hydrants repaired	757
Fire hydrants changed to grade	2	New drinking fountains erected	2
Fire hydrants moved	6	Drinking fountains repaired	33
Fire hydrants repaired	457	Services laid to curb	0
Taps made	1,730	Services lowered (number)	428
New hydrants erected	2	Street-washers and service boxes adjusted to new grade	351
New hydrants to replace old ones	4		

TABLE 2.—*Summary statement of distribution system.*

Mains.	Laid prior to June 30, 1888.	Laid during 1888 and 1889.	Total June 30, 1889.
75 inches diameter	662	.....	662
48 inches diameter	6,848	.....	6,848
36 inches diameter	22,677	.....	22,677
30 inches diameter	27,197	.....	27,197
24 inches diameter	.....	2,312	2,312
20 inches diameter	15,185	5,144	20,329
12 inches diameter	70,989	5,626	76,615
10 inches diameter	9,314	2,784	12,098
8 inches diameter	5,925	.....	5,925
6 inches diameter	677,621	36,742	714,363
4 inches diameter	9,440	6,571	16,011
3 inches diameter	17,684	8,753	26,437
6 and 4 inch mains to fire hydrants	26,280	.....	26,280
4 inches diameter and smaller	108,030	.....	108,030
Total	997,852	67,932	1,065,784
Stop valves	1,427	142	1,569
Fire hydrants	1,017	45	1,062
Street hydrants	284	2	*280
Service connections	29,249	1,970	31,219
Taps	23,489	1,730	25,219

* Six street hydrants have been abandoned.

Statement of fire hydrants, street hydrants, etc., in the several sections of the city.

	Fire hydrants.	Street hydrants.	Pumps.	Horse fountains.	Public fountains.
Georgetown	77	39	17	2	1
Northwest	610	125	117	40	31
Northeast	108	30	33	2	6
Southwest	108	45	47	4	0
Southeast	159	41	72	3	1
Totals	1,062	280	286	51	39

The following tables, A and B, show the size of the houses supplied with Potomac water, and the number and kinds of the miscellaneous consumers:

TABLE A.—*Houses in the District of Columbia supplied with Potomac water.*

Front feet.	Two stories.						Three stories.						Four stories.						Five stories.					Six stories.		Eight stories.		Grand total.
	Georgetown.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Georgetown.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Georgetown.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Northwest.	Total.	Northwest.	Total.	
16	559	5,453	1,359	1,912	1,343	10,626	124	1,597	496	213	188	2,618	5	514	4	2	9	534	17	1			18					13,796
17	59	393	178	87	130	847	19	337	59	59	61	535	1	200	6		5	212	14	3			17					1,611
18	54	582	232	147	119	1,134	42	696	111	111	112	1,072	13	247	43	5	21	329	8				8					2,543
19	19	199	84	30	27	359	11	410	55	9	64	549	4	157	7	1	12	181	4				4					1,093
20	148	877	74	183	228	1,507	71	771	98	98	121	1,159	19	656	51	11	13	750	36	5			41					3,457
21	35	142	21	34	31	263	24	167	15	22	16	244	6	133	23	1	16	179	9	2			11					697
22	41	180	31	50	50	352	29	292	26	43	40	430	7	212	16	6	9	250	15				15					1,047
23	18	64	9	11	11	113	27	123	11	11	12	184	8	131	4	1	3	147	11				11					455
24	25	81	14	32	24	176	27	187	14	17	4	249	6	208	7	6	3	230	19	1			20	1	1			676
25	15	112	20	28	15	190	26	260	12	22	14	334	10	296	6	8	5	325	24	1			25					874
26	5	46	7	3	7	68	11	269	2	6	6	294	4	88	4	1		97	16	1			17					476
27	1	16	1	4	2	24	5	35	1		1	42	9	51	2	1	1	64	14				14					144
28	10	28	3	2	4	47	9	40	4	3	5	61	1	47	3	1	1	53	7				7					168
29	2	13	1		2	18	2	17				19	4	18		1	1	24	5				5					66
30	6	32		6	5	49	14	41		3	2	60	2	52		2	1	57	3				3					169
31		2				2	2	18			1	21		11	2	1		14	1				1					38
32	4	4		4		12	5	13	2	2	1	23	2	12	1			15	2				2					52
33	4	2	2	3	3	14	5	11	1		1	18	1	10				11	1				1					44
34	3	5	2		3	13	4	10	2		1	17		17	1			18										48
35	3	8	1		5	17	3	16	1		1	21		14				14	2				2					54
36		2	2			4	3	25	1			29	1	14				15	1				1					49
37		2			1	3	2	1	1		1	5	1	2			1	4	1				1					13
38	4	2	1		1	8	1	12				13		23	1		1	25	1				1					47
39	4	1				5	2	4	1		2	9		10				10	1				1					25
40	6	6	4		3	19	4	26		3		33	3	49				52	1				1					105
41		1				1		6				6		9				9										16
42	1	6				7	2	7			1	10		13	1			14										31
43	1	2		1		4		3	1			4		6				6	2				2					16
44		2		1		3		7			1	8	1	5				6										17
45		7				7	2	7				9		21		1		22	1				1					39
46		2				2		3				3	1	10				11	2				2					18
47	1	1				2		2				2		2				2										6	
48					1	1	2	6				8		6				6	3				3					18	
49		1				1								2				2										3	
50	1	3			2	6	1	11	1	1	1	15	2	18			1	21	5			1	6	1	1			49	
51	1	1				2		1				1		2				2								1	1	5	
52								2				2		2				2										5	

TABLE A.—*Houses in the District of Columbia supplied with Potomac water*—Continued.

Front feet.	Two stories.						Three stories.						Four stories.						Five stories.					Six stories.		Eight stories.		Grand total.
	Georgetown.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Georgetown.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Georgetown.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Northwest.	Northeast.	Southwest.	Southeast.	Total.	Northwest.	Total.	Northwest.	Total.	
53								3				3		2				2										5
54		1				1		1				1		1				1										3
55	1					1		3				3		3				3										7
56														3				3	3				3					6
57							1					1		1				1						1	1			3
58	1					1																						1
60	2					2	2	2				4		9				9	1				1					16
61														1				1										1
62	1	5				6	1					1		1				1						1	1			9
63																												
64							1					1		1				1										2
65																												
66							1					1		2				2										3
67																												
68														2				2										2
69														1				1										1
72							1					1		1				1										2
74																			1				1					1
75														5				5	2				2					7
76																								1	1			1
80														1				1										1
82	1					1																						1
88								1				1																1
96	1					1																						1
127	1					1																						1
	1,038	8,284	2,046	2,535	2,017	15,920	486	5,443	915	623	657	8,124	111	3,302	182	49	103	3,747	233	14	....	1	248	5	5	1	1	28,045

TABLE B.—*Miscellaneous water-takers.*

Miscellaneous.	Georgetown.	Northwest.	Northeast.	Southwest.	Southeast.	Total.
Armories		2				2
Barber-shops	4	103	8	7	6	128
Bakeries	7	44	7	18	9	85
Banks	1	13				14
Bar-rooms	12	245	28	63	33	381
Boarding houses	1	98	34		6	139
Breweries		2	2	1	1	6
Bottling depots	1	4	1	6	1	13
Book-binderies		4				4
Baths	1	2				3
Churches	9	39	4	7	6	65
Colleges	1	12				13
Club-rooms		8				8
Dining-rooms		22				22
Dye-houses	1	14				15
Florists		3			1	4
Foundries	3	5		2		10
Gas-engines		3	*1	1		5
Greenhouses	2	7	3		1	13
Halls	3	40		3	5	54
Hotels	1	37				38
Hospitals		2		1	1	4
Laundries		33	1	3	3	40
Manufactories		13	1		1	15
Market-houses	1	4			1	6
Mills	5	2	1	2		10
Orphan asylums		3				3
Offices	13	763	5	6	5	792
Printing-houses		13				13
Photo-galleries		25				25
Restaurants	6	226	3	5	9	249
Riding schools		2				2
Railroad stations		2				2
Stables, livery	3	51	1	1	5	61
Stables, private	44	583	52	8	26	713
Schools, public	4	29	11	3	5	52
Schools, private	1	23	1	2	1	28
Shops	9	126	6	7	7	155
Steam boilers		56	2	1		59
Steam-engines	15	62	6	11	5	99
Slaughter-houses		1	3			4
Stores	361	946	16	63	86	1,472
Stone-yards		5	3	2		10
Theaters		4				4
Warehouses	5	32	3	7	5	52
Wood and coal yards		11	1	1	6	19
Steam-boat wharves				6		6
Factories	1				2	3
Convents	1	1				2
Car stables	2	3	1	3	2	11
Brick-yards			1		2	3
Museums				3		3
Police stations	1	4	2	1	1	9
Engine-houses	1	4	1	1	2	9
Truck company, "A"			1			1
Truck company, "B"			1			1
Total	520	3,735	210	245	244	4,954

These tables may be summarized as follows:

—	Number.	Per cent.
Georgetown	1,635	.0583
Northwest section	17,268	.6157
Northeast section	3,157	.1125
Southwest section	3,207	.1144
Southeast section	2,778	.0991
Total number of houses supplied with Potomac water for domestic purposes	28,045	

	Number.	Per cent.
Georgetown	520	.1050
Northwest section	3,735	.7539
Northeast section	210	.0424
Southwest section	245	.0494
Southeast section	244	.0493
Total number of miscellaneous water-takers	4,954	

Financial statement for fiscal year 1888–'89.

Receipts from July 1, 1888, to June 30, 1889, inclusive:		
Water-tax:		
Current tax	$36,464.29	
Advertised tax	5,524.26	
		$41,988.55
Interest:		
On current tax	1,099.94	
On advertised tax	3,192.09	
		4,292.03
Water-rents		189,407.39
Water-taps for services		5,190.00
Permits for attachments, etc		3,492.45
Water for building purposes		2,083.71
Total		*246,454.13
Expenditures from July 1, 1888, to June 30, 1889, inclusive:		
Salaries		†15,038.52
Contingent expenses		‡2,556.67
Refunds:		
Water-rents	1,173.78	
Water-main taxes	35.91	
		1,209.69
Purchase of new pumping-engines and boilers		26,825.03
Purchase of pump-house lot		2,275.00
Material and labor, 20-inch and 24-inch main, Fourteenth street, west, and B street, south:		
Material	§21,243.14	
Labor	6,299.64	
Pumping expenses and pipe distribution:		
Washington pump-house	$8,525.68	
Georgetown pump-house	7,791.46	
Total pumping expenses	16,317.14	
New mains, valves, blow-offs, etc., labor	16,137.10	
New mains, valves, blow-offs, etc., material	30,661.98	
Total for new mains, etc	46,799.08	
Fire hydrants, labor	956.47	
Fire hydrants, material	2,999.52	
Total for fire hydrants	3,955.99	
For repairing cuts in pavement:		
For repairs	2,410.27	
For new work	230.42	
Total for repairing cuts	‖2,640.69	
Repairs, inspections, changes, and all general expenses of water service, labor, and material	25,336.52	
On account of appropriations for former years:		
On account of 1883	10.00	
On account of 1887	1,541.19	
On account of 1888	5,828.18	
Total on account of former years	7,379.37	
		102,428.79

* This does not include $690.74, amount of repayments to appropriation for "pumping expenses and pipe distribution," on account of permit work done during year.

† Of this amount $6 was paid on account of appropriation 1887–'88.

‡ Of this amount $10 was paid on account of 1885–'86, $250.55 on account of 1886–'87, and $127.03 on account of 1887–'88.

§ This is not included in this year's expenditures, as it is, by act of Congress, directed to be paid from revenues of the year ending June 30, 1890.

‖ This work was not done by water department, but by outside contract under supervision of street department.

Interest and sinking-fund on account of increasing water supply		$76,655.69
Interest and sinking-fund on account of water-stock bonds		44,610.00
Total interest and sinking-fund		$121,265.69
Interest and sinking-fund on account of increasing water supply:		
Interest	28,896.30	
Sinking-fund	52,386.96	
		271,599.39
Water tax levied during the year		51,240.96
Water tax arrears June 30, 1889:		
Amount subject to exemption act of March 3, 1881	4,113.78	
Amount charged against District of Columbia property	1,391.79	
Amount collectible	59,376.77	
Total amount water-tax arrears June 30, 1889		64,882.34

Organization of and estimates for the water division for the fiscal year 1891.

One chief clerk		$1,500.00
One superintendent		1,600.00
Two clerks, at $1,400		2,800.00
One clerk, at $1,200		1,200.00
One clerk, at $1,000		1,000.00
One draughtsman		1,500.00
One inspector		939.00
Six inspectors, at $900		5,400.00
One messenger		600.00
Total salaries		16,539.00
Contingent expenses		2,500.00
Pumping expenses	$16,000.00	
Repairs and maintenance	20,000.00	
Fire and street hydrants	10,000.00	
Service mains	40,000.00	
		86,000.00
Interest and sinking-fund, water-stock bonds		44,610.00
Sinking-fund on account of increasing the water supply		53,015.74
Interest on account of increasing water supply		31,809.44
Total		234,474.18

The above estimates aggregate somewhat less than those presented last year. The services of the additional clerk estimated for are absolutely essential to the proper performance of the work of the division.

Comparative statement of revenues, actual and estimated.

Fiscal year.	Waterrents.	Water taxes.	Taps.	Permits.	Total revenues.
1884-'85	118,528.20	20,578.88	3,402.00	3,076.09	145,585.17
1885-'86	124,896.22	36,162.04	5,096.00	3,459.03	169,613.29
1886-'87	138,539.49	47,183.24	6,012.00	4,846.45	196,581.18
1887-'88	171,892.49	34,264.85	4,182.00	4,809.92	215,149.26
1888-'89	189,407.39	46,280.58	5,190.00	5,576.16	246,454.13
1889-'90 (estimated)	200,000.00	40,000.00	5,000.00	5,000.00	250,000.00
1890-'91 (estimated)	205,000.00	45,000.00	5,000.00	5,000.00	260,000.00

Balance due water fund in United States Treasury, June 30, 1889		$77,330.62
Estimated revenues, fiscal year 1890		250,000.00
		327,330.62
Interest and sinking fund on account of increasing water supply, advanced since July 1, 1889		81,283.26
Estimated expenditures, fiscal year 1890, including repayment of cost of Fourteenth-street main as required by law		246,047.36
		327,330.62
Estimated revenues, fiscal year 1891		260,000.00

* This item of $81,283.26 was not advanced to the Treasurer of United States until after the close of the fiscal year, and is not included in expenditures.

SUMMARY OF ESTIMATES, FISCAL YEAR 1891.

Salaries	$16,539.00
Contingent expenses	2,500.00
Pumping expenses and pipe distribution	86,000.00
Interest and sinking fund account	129,435.18
Total	234,474.18

There are submitted below five tables relating to the finances of the water division as affected by the operations of the year. These five tables are followed by a sixth, which shows the location and cost of each main laid during the year.

TABLE I.—**Statement of assessments and collections of water-main tax from July 1, 1878, to June 30, 1889.*

Fiscal year.	Amount assessed.	Duplicate payments and over-payments.	Six per cent. abatement.	Amount of tax canceled subsequent to July 1, 1878.	Amount collected July 1, 1878, to June 30, 1889.	Amount outstanding July 1, 1889, subject to exemption act of March 3, 1881.	Amount of collectible tax outstanding July 1, 1889.
(†)	‡$94,124.78	$154.31	.....	$3,271.71	$75,126.46	$4,060.10	$11,820.82
1879	11,488.89	38.96	$138.54	79.24	10,279.01	53.68	977.38
1880	4,965.13	.....	156.40	.....	4,721.56	.....	87.17
1881	7,775.35	.....	265.78	316.07	6,404.99	.....	788.51
1882	3,313.89	.....	67.40	.....	3,071.00	.....	175.49
1883	3,495.75	.....	91.62	.....	3,395.67	.....	8.46
1884	23,325.37	.....	399.73	281.06	18,328.18	.....	4,316.40
1885	27,492.36	.39	662.58	.....	23,073.90	.....	3,756.27
1886	40,517.79	2.00	1,311.03	1,003.72	31,185.94	.....	7,049.10
1887	47,345.86	67.44	1,458.17 §195.06	206.24	36,543.32	.....	9,010.57
1888	21,594.48	342.60	907.27 ‖138.72	1,123.54	17,604.95	.....	2,162.60
1889	51,240.96	35.91	1,648.32 §28.75	1,384.50	28,991.30	.....	19,224.00
Total	336,710.61	641.61	7,469.31	7,666.08	258,726.28	4,113.78	59,376.77

* By a clerical error, the corresponding table in last year's report was made to include collections of interest.

† Amount of tax outstanding and uncollected July 1, 1878.

‡ Of this amount $70.29, assessed August 1, 1876, was left out for several years by mistake in copying books, but was discovered and replaced this year.

§ Amount of abatement allowed property-owners on College Hill for amounts paid by them to R. A. Charles.

‖ This abatement is amount allowed on tax assessed in June, 1888, but not paid until after July 1, 1888, and is therefore credited against the assessment of the year ending June 30, 1888.

RECAPITULATION.

Total amounts of assessments plus duplicate payments	$337,352.22
Amount of abatement at 6 per cent	7,245.56
Amount of abatement allowed property-owners on College Hill for amounts paid by them to R. A. Charles	223.75
Amount of tax canceled and struck off the books since July 1, 1878:	
By order of Commissioners, District of Columbia, various dates	3,626.76
By reason of issue of erroneous tax certificates	332.38
By act of Congress for relief of E. W. Patterson, approved June 13, 1885	215.68
By reason of subdivision of property	816.17
By amount charged against District of Columbia	1,391.79
By amount charged against the United States	640.30
By amount canceled by decision supreme court, District of Columbia	643.00
Amount of tax collected from July 1, 1878, to June 30, 1889	258,726.28
Amount outstanding July 1, 1889:	
Subject to exemption, act of March 3, 1881	4,113.78
Collectible tax	59,376.77
	337,352.22

TABLE II.—*Statement of receipts of the water department, District of Columbia, from July 1, 1878, to June 30, 1889.*

Fiscal year.	Mains to Govt. Printing Office.	Water-main tax.		Interest water-main tax.	
		Advertised.	Current.	Advertised.	Current.
Received year ending June 30—					
1879	.....	$6,195.59	$12,463.10	$1,635.96	$1,059.53
1880	.....	10,248.87	11,926.81	3,457.43	1,340.18
1881	.....	3,200.38	18,368.39	1,228.94	4,040.08
1882	$2,800.00	4,017.92	3,305.50	2,086.07	392.34
1883	1,750.00	7,320.13	5,467.96	3,769.83	350.54
1884	.....	3,563.12	8,790.53	2,385.59	122.42
1885	.....	3,282.57	14,430.22	2,598.81	267.28
1886	.....	3,564.81	29,631.30	2,343.44	622.49
1887	.....	7,630.50	34,874.59	3,183.62	1,494.53
1888	.....	8,605.53	19,939.91	5,120.55	598.86
1889	.....	5,524.26	36,464.29	3,192.09	1,099.94
Repayments during various fiscal years	.....	.....	.....	.....	.....
Total	4,550.00	63,153.68	195,572.60	31,002.33	11,388.19

Fiscal year.	Water-rents.	Taps.	Permits and other sources.	Total receipts.
Received year ending June 30—				
1879	$43,574.24	$1,986.00	$2,139.25	*$69,053.67
1880	165,641.42	1,980.00	2,188.10	196,782.81
1881	109,737.83	1,851.00	1,915.72	†140,342.34
1882	101,621.10	1,815.00	1,789.71	117,827.64
1883	65,752.24	2,193.00	2,188.72	88,792.42
1884	119,610.20	2,373.00	2,418.79	139,173.65
1885	118,528.20	3,402.00	3,076.09	145,585.17
1886	124,896.22	5,096.00	3,459.03	162,613.29
1887	138,539.49	6,012.00	4,846.45	196,581.18
1888	171,892.49	4,182.00	4,809.92	215,149.26
1889	189,407.39	5,190.00	5,576.16	246,454.13
Repayments during various fiscal years	.....	.....	.....	1,121.94
Balance on hand July 1, 1878	.....	.....	.....	16,809.42
Total	1,349,200.82	36,080.00	34,407.94	1,743,286.92

* This does not include $12.50 which the United States Treasurer has credited to this year's receipts, but which does not appear on books of water department.
† December 10, 1880, there was collected $10.75 on account of water-main tax (advertised), which sum was deposited to the credit of "arrears of general taxes."

TABLE III.—*Expenditures.*

Fiscal year.	Purchase of pump-house lot.	Purchase of new pumping engines and boilers.	Material and labor, pumping expenses, and pipe distribution.	Salaries water department.	Contingent expenses.	Water rent refunded.
Expended in—						
1879	.....	.....	$44,871.89	$7,710.00	$506.09	$164.51
1880	.....	.....	48,752.55	10,417.61	962.19	32,130.10
1881	.....	.....	52,781.67	10,830.00	1,141.10	284.69
1882	.....	.....	42,334.11	11,670.23	.....	152.21
1883, on account of 1882	.....	.....	3,523.73	.....	.....	.....
1883, on account of 1883	.....	.....	43,551.24	9,339.00	1,009.43	303.38
1884, on account of 1883	.....	.....	5,950.26	.....	819.23	.....
1884, on account of 1884	.....	.....	46,454.04	9,339.00	1,548.12	590.01
1885, on account of 1883	.....	.....	102.00	.....	8.75	.....
1885, on account of 1884	.....	.....	941.11	.....	223.61	.....
1885, on account of 1885	.....	.....	79,878.66	9,312.90	1,954.07	373.44
1886, on account of 1885	.....	.....	17,472.69	.....	109.83	.....
1886, on account of 1886	.....	.....	58,655.72	9,339.00	2,148.63	385.08
1887, on account of 1885	.....	.....	.....	.....	8.00	.....
1887, on account of 1886	.....	.....	10,847.18	.....	239.68	.....
1887, on account of 1887	.....	.....	73,598.68	9,522.20	2,392.26	580.77
1887, on account of 1888	.....	.....	16,796.19	.....	.....	.....

TABLE III.—*Expenditures*—Continued.

Fiscal year.	Purchase of pump-house lot.	Purchase of new pumping engines and boilers.	Material and labor, pumping expenses, and pipe distribution.	Salaries water department.	Contingent expenses.	Water rent refunded.
Expended in—						
1888, on account of 1886			$239.85			
1888, on account of 1887			1,046.43		2.98	
1888, on account of 1888		$6,216.21	75,616.18	$9,536.00	$2,364.66	$982.27
1889, on account of 1883			10.00			
1889, on account of 1886					10.00	
1889, on account of 1887			1,541.19		250.55	
1889, on account of 1888		26,825.03	5,828.18	6.00	127.03	
1889, on account of 1889	$2,275.00		95,049.42	15,032.52	2,169.09	1,173.78
Total	2,275.00	33,041.24	725,842.97	112,054.46	17,995.30	37,120.24

Fiscal year.	Water-main tax refunded.	Interest on water-main tax refunded.	Erection of stand-pipe.	Water-main to Government Printing Office.	Total expenditures.
Expended in—					
1879	$29.12	$9.07	$29,395.40		$82,686.08
1880	35.26	15.47	3,237.47		95,550.65
1881		5.55	1,580.39		66,623.40
1882	9.14	7.18			54,172.87
1883, on account of 1882					3,523.73
1883, on account of 1883	38.96	22.41		$5,599.94	59,864.36
1884, on account of 1883					6,709.49
1884, on account of 1884	80.79	82.78		3,346.27	61,441.01
1885, on account of 1883					110.75
1885, on account of 1884					1,164.72
1885, on account of 1885					91,519.07
1886, on account of 1885					17,582.52
1886, on account of 1886					70,528.43
1887, on account of 1885					8.00
1887, on account of 1886					11,086.86
1887, on account of 1887	59.57				86,153.48
1887, on account of 1888					16,796.19
1888, on account of 1886					239.85
1888, on account of 1887					1,049.41
1888, on account of 1888	342.60				95,057.92
1889, on account of 1883					10.00
1889, on account of 1886					10.00
1889, on account of 1887					1,791.74
1889, on account of 1888					32,786.24
1889, on account of 1889	35.91				115,735.72
Total	631.35	142.46	34,213.26	8,946.21	972,262.49

TABLE IV.—*Advances to Treasurer United States.*

Fiscal year.	Interest and sinking fund water stock bonds.	Interest and sinking fund increasing water supply.	Total interest and sinking fund.
Advanced to Treasurer United States, *ex officio* commissioner of sinking-fund District of Columbia:			
1880			
1881	$74,025.00		$74,025.00
1882	74,123.77		74,123.77
1883	43,796.08		43,796.08
1884	44,610.00		44,610.00
1885	44,575.00		44,575.00
1886	44,610.00	$13,686.23	58,296.23
1887	31,485.00	55,047.27	86,532.27
1888	57,735.00		57,735.00
1889	31,485.00	57,239.02	88,724.02
	44,610.00	76,655.69	121,265.69
Totals	491,054.85	202,628.21	693,683.06

RECAPITULATION.

To amount collected, of which there has been deposited in the United States Treasury and credited to water fund the sum of	$1,743,286.92
By amount expended from July 1, 1878, to June 30, 1889	972,262.49
By amount advanced to Treasurer United States, *ex officio* commissioner sinking fund District of Columbia, during said period	693,683.06
By amount collected on account of water-main tax and deposited to credit of general taxes December 20, 1880	10.75
Balance to credit of water fund District of Columbia, July 1, 1889	77,330.62
	1,743,286.92

TABLE V.—*Statement of the length and cost of water mains laid from July 1 to June 30, 1889.*

Fiscal year.	30-inch.	24-inch.	20-inch.	12-inch.	10-inch.	8-inch.	6-inch.	4-inch.	3-inch.	Total.	Cost.
	Feet.	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	
1879	39½	.....	.....	3,791	.....	.....	12,781	30	.....	16,641½	$14,846.20
1880	.....	.....	.....	7,409	.....	.....	8,546	1,397	.....	17,352	19,436.03
1880	.....	.....	.....	.....	.....	.....	*3,024	.....	.....	3,024	.....
1881	.....	.....	.....	.....	.....	.....	3,709	.....	.....	3,709	3,110.70
1882	.....	.....	.....	.....	.....	.....	1,920	.....	.....	1,920	1,626.43
1883	.....	.....	.....	1,625	.....	26	4,084	.....	.....	5,735	8,073.70
1884	.....	.....	.....	1,038	.....	.....	8,972	.....	.....	10,010	10,492.51
1885	.....	.....	.....	963	.....	.....	27,766	358	485	29,572	25,865.35
1886	.....	.....	.....	1,938	791	.....	35,192	.....	6,623	44,544	40,025.10
1887	.....	.....	14,835	‡1,124	‡2,998	.....	†30,041	†292	7,124	46,414	56,951.00
1888	.....	.....	.....	731	.....	.....	†9,123	†9,148	†3,937	22,939	17,626.63
1889	.....	2,312	5,144	5,626	2,784	.....	36,742	6,571	8,753	67,932	79,342.16
	39½	2,312	9,979	24,245	6,573	26	181,900	17,796	26,922	269,792½	277,395.81

* Laid on Road street, Georgetown, to replace old cement pipe.
† Cost of laying intersections not included herein.
‡ 1074 feet to United States Library site, cost not included herein.

TABLE VI.—*Statement showing the cost of water-mains laid during the fiscal year* 1888–'89, *and the assessments levied therefor.*

Street.	Streets between.	Size.	Length.	Cost of material.	Cost of labor.	Total cost.	Amount of assessment.	Excess of cost over assessment.	Excess of assessment over cost.
		Inch.	*Lin. ft.*						
In alley	First and Second, F and G, southwest	3	321	$99.95	$104.11	$204.06	$121.91	$82.15	
	Fifteenth and Sixteenth, L and M, northwest	3	497	146.42	79.87	226.29	138.40	87.89	
		6	3						
	First and Second, E and F, northwest	3	379	102.28	56.82	159.10	162.02		$2.92
	Second and Third, G and Massachusetts avenue, northwest.	3	266	86.85	86.30	173.15	4.38	168.77	
		6	3						
	Sixth and Seventh, E and G, southwest	3	295	74.30	59.24	133.54	76.66	39.40	
	Fifteenth and Vermont avenue, L and M, northwest	3	529	138.73	151.23	289.96	87.79	143.88	
		6	3						
	Twenty-fifth and Twenty-sixth, I and K, northwest	3	612	159.64	126.23	285.87	96.11	189.76	
		6	3						
	First and New Jersey avenue, K and L, southeast	3	288	78.41	71.91	150.32	468.24		318.02
		6	3						
	Tenth and Eleventh, South Carolina avenue and C, southeast.	3	163	42.56	40.87	83.43			
	Thirteenth and Fourteenth, L and Massachusetts avenue, northwest.	3	57	16.91	33.37	50.28	14.88	35.40	
	Third and Fourth, A and B, northeast	3	391	109.36	156.99	266.35	24.78	241.57	
	Ninth and Tenth, E and F, southwest	3	546	145.40	177.37	322.77	40.47	282.30	
		6	6						
Center Covington	Ninth and Tenth, Rhode Island avenue and R, northwest.	3	312	87.20	103.00	190.20	159.26	30.94	
		6	3						
In alley	Ninth and Tenth, D and E, southwest	3	553	157.58	114.55	272.13	332.08		59.95
		6	7						
	Fourth and Fifth, N and O, northwest	3	300	85.66	69.62	155.28	12.28	143.00	
		6	3						
	Sixth and Seventh, Rhode Island avenue and S, northwest.	3	675	182.72	143.25	325.97	296.52	29.45	
		6	7						
	Thirteenth and Fourteenth, V and W, northwest	3	261	63.70	73.83	137.53	58.41	79.12	
	First and Third, Q and R, northwest	3	520	125.31	90.65	215.96	191.36	24.60	
	Second and Delaware avenue, G and H, northeast	3	148	47.77	41.87	89.64			
		6	3						
	Second and Third, East Capitol and A, northeast	3	172	55.23	75.48	130.71			
		6	3						
	Twenty-second and New Hampshire avenue, M and N, northwest.	3	318	92.44	146.01	238.45	56.44	182.01	
	Sixth and Seventh, H and I, northeast	3	360	95.46	83.62	179.08			
	Thirty-third and Thirty-fourth, P and Q, northwest	3	174	46.78	35.25	82.03	67.78	14.25	
Center Blake	Alley to Sixteenth	4	125	44.68	18.50	63.18	22.80	40.38	
South side I	Fourth and Fifth, southeast	4	227	95.29	49.25	144.54	79.68	64.86	
		6	3						

Ivy Place	New Jersey avenue and South Capital, D and E, southeast.	4	500	184.51	78.00	262.51	845.69			583.18
		6	3							
North side Q	Sixteenth and Seventeenth, northwest	4	438	156.31	85.77	242.08	204.47	37.61		
East side Twelfth	V and W, northwest	4	400	151.00	53.25	204.25	282.64			78.39
North side B	First and New Jersey avenue, northwest	4	563	231.85	99.87	331.72	178.14	153.58		
		6	19							
South side Boundary	Eighteenth and Nineteenth, northwest	4	375	154.11	88.37	242.48				
North side G	Ninth and Tenth, southwest	4	554	197.83	84.28	282.11	648.91			366.80
North and south side H	Seventh and Eighth, southwest	4	594	217.88	166.37	384.25	218.18	166.07		
Center Wiltberger	Sixth and Seventh, S and T, northwest	4	532	180.00	114.49	294.49	201.60	92.89		
		6	7							
Center Corcoran	Seventeenth and New Hampshire avenue, northwest	6	760	431.77	100.50	532.27	1,042.25			509.98
Center Eighth	F and G, southwest	6	297	160.59	74.87	235.46	119.97	115.49		
Center D	Fifth and Sixth, northeast	6	264	118.08	43.75	161.83	258.20			96.37
Center G	Tenth and Eleventh, southeast	6	276	122.04	72.62	194.66	478.73			284.07
Center F	Seventh and Eighth, northeast	6	380	229.88	73.25	303.13	230.00	73.13		
Center Seventeenth	Corcoran and R, northwest	6	265	124.10	98.49	222.59	156.20	66.39		
Center R	Seventeenth and New Hampshire avenue, northwest.	6	583	264.91	163.18	428.09	930.08			501.99
Center P	Third and New Jersey avenue, northwest	6	266	117.51	57.12	174.63	115.40	59.23		
Center Second	H and I, northeast	6	288	127.74	64.43	192.17	418.27			226.10
Center Tenth	U and V, northwest	6	392	174.05	73.25	247.30	247.21	.09		
South side D	Eighth and Pennsylvania avenue, southeast	6	206	99.84	58.31	158.15	75.73	82.42		
Center K	Sixth and Seventh, southwest	6	484	214.08	114.50	328.58	609.59			281.01
Center Sixth	G and H, northeast	6	401	179.12	80.37	259.49	545.81			286.32
Center L	Twenty-sixth and Twenty-seventh, northwest	6	346	147.95	73.87	221.82	329.69			107.87
Center Corcoran	Eighteenth and Nineteenth, northwest	6	438	219.49	75.25	294.74	389.39			94.65
Center V	Tenth and Vermont avenues, northwest	6	363	165.95	99.37	265.32	223.40	41.92		
Center Second	E and F, southwest	6	322	146.87	112.80	259.67	262.88			3.21
Center Ninth	B and C, northeast	6	565	258.46	120.86	379.32	793.93			414.61
North Carolina avenue	Sixth and Seventh, southeast	6	369	222.96	112.49	335.45				
Center K	Ninth and Tenth, northeast	6	314							
Center Tenth	K and Boundary, northeast	6	416	689.93	366.98	1,056.91	2,499.56			1,442.65
North side Boundary	Ninth and Eleventh, northeast	6	515							
Center H	Second and Third, southwest	6	434	256.02	106.87	362.89	496 05			133.16
Center Juniper	Maple and Spruce	6	377	232.44	124.12	356.56	192.11	164.45		
East and west side North Capitol	P and Boundary	6	936	511.45	270.74	782.19	672.39	109.80		
Center Eighth	East Capitol and A, southeast	6	348	160.83	80.50	241.33	339.85			98.52
North side Boundary	Eleventh and Fourteenth, northeast	6	2,137	1,168.29	545.60	1,713.89	3,525.24			1,811.35
Center D	Seventh and Eighth, northeast	6	314	172.91	93.12	266.03	207.69	58.34		
Center Twenty-fifth	H and I, northwest	6	402	241.50	141.11	382.61	311.96	70.65		
West side New Jersey	K and L, northwest	6	350	165.88	88.12	254.00				
Center N	Eleventh and Twelfth, northwest	6	156	71.10	37.62	108.72	183.26			74.54
Center Twelfth	South Carolina avenue and D, southeast	6	288	131.22	54.99	186.21	435.03			248.82
Center Third	F and K, southwest	6	1,301	712.99	255.36	968.35	1,687.54			719.19
Sixth	Pomeroy and College	6	715							1,434.24
		4	12	1,260.09	659.74	1,919.83	3,354.07			1,434.24
East side Seventh	Boundary and Pomeroy	6	505							
Pomeroy	Fourth and Seventh	6	1,122							
East and west side Sixth	South Carolina avenue and D, southeast	6	599	293.21	228.75	521.96	175.85	346.11		
North side L	Twenty-first and New Hampshire avenue, northwest	6	585	319.33	155.68	475.01				

TABLE VI.—*Statement showing the cost of water-mains laid during the fiscal year* 1888–'89, *and the assessments levied therefor*—Continued.

Street.	Streets between.	Size.	Length.	Cost of material.	Cost of labor.	Total cost.	Amount of assessment.	Excess of cost over assessment.	Excess of assessment over cost.
		Inch.	*Lin ft.*						
North and south side R	Twelfth and Thirteenth, northwest	6	665	$364.59	$212.33	$576.92	$342.23	$234.69	
		6	4						
Center D	First and Second, northeast	6	622	310.89	133.25	444.14	966.68		$522.54
Center Tenth	K and Virginia avenue, southeast	6	228	104.27	59.99	164.26	28.03	136.23	
Center M	Third and Delaware avenue, southwest	6	300	137.01	113.99	251.00	331.41		80.41
South side T	Fifteenth and Sixteenth, northwest	6	450	235.00	173.24	408.24	267.41	140.83	
		6	4						
		4	7						
North side Boundary	Fourteenth and Fifteenth, northwest	6	1,020	577.36	245.75	823.11	1,230.88		407.77
Alley	Fourteenth and Fifteenth, Boundary and Stoughton								
South side P	Eleventh and Twelfth, northwest	6	386	196.90	169.84	366.74			
East side Fifteenth	Gales and Rosedale	6	306	324.92	117.00	441.92	1,829.96		1,388.04
Center Rosedale	Fifteenth and Sixteenth	6	412				375.94		230.00
Center F	Ninth and Tenth, northeast	6	236	107.94	38.00	145.94			547.78
Center Ninth	B and C, southeast	6	540	250.72	96.87	347.59	895.37		47.97
Center Riggs	R and S, Sixteenth and Seventeenth, northwest	6	488	253.79	66.88	320.67	368.64		525.74
Center Stoughton	Fourteenth and Fifteenth, northwest	6	120	56.94	36.88	93.82	619.56		
New Jersey avenue	O and P, northwest	6	409	217.81	99.83	317.64	81.10	236.54	
South side Pennsylvania ave.	Twelfth and Thirteenth, southeast	6	435	265.61	87.43	353.04	63.06	289.98	
Center Ninth	East Capitol and A, southeast	6	350	224.43	79.50	303.93	329.12		25.19
Center D	Eighth and Ninth, northeast	6	310	145.11	79.71	224.82	155.97	68.85	
East side Sixth	Massachusetts avenue and B, northeast	6	342	170.36	88.02	258.38	124.13	134.25	
West side Sixth	L and M, southwest	6	388	220.27	91.37	311.64			
Center M	Fourth and Fifth, northeast	6	328	272.40	88.74	361.14	335.00	26.14	
		4	4						
Center Third	G and H, northeast	6	420	188.81	85.75	274.56	785.17		510.61
East side South Capitol	M and N	6	533	261.97	102.25	364.22			
West side New Jersey avenue	Warner and R	6	246	117.78	74.75	192.53	250.50		57.97
West side Fourteenth	Chapin and Euclid	6	626						
West side Fourteenth	Euclid and Huntingdon	6	324	1,018.49	534.86	1,553.35	7,364.44		5,835.21
West side Fourteenth	Huntingdon and Binney	6	353						
Center Binney	Fourteenth and Fifteenth extended	6	670						
North and south side M	Twenty-second and Twenty-third, northwest	6	546	257.44	96.75	354.19	341.61	12.58	
Eleventh	Anacostia Bridge and Virginia avenue	10	2,784	3,052.29	807.14	3,859.43			
Virginia avenue	Eleventh and Eighth, southeast	12	5,614						
		6	12	8,076.36	1,694.87	9,771.23			
Virginia avenue	South Capitol and Eighth, southeast	12	12						
		20	300						
U	Sixteenth and Seventeenth, northwest	6	8	934.44	512.36	1,446.80			
		3	440						
In alley	Thirteenth and Fourteenth, G and H, northeast	6	108	180.30	71.25	251.55	306.01		54.46
G	Thirteenth and Maryland avenue, northeast	6	3						

In alley	Sixth and Seventh, S and T, northwest	3	150							
In alley	Sixth and Seventh, S and T, northwest	4	389	202.12	126.73	328.85	172.84	156.01		
		6	6							
Maryland avenue	Twelfth and Fourteenth, northeast ‡	4	1,570	1,191.68	339.98	1,531.66	2,816.95		1,285.29	
		6	803							
North side B	Tenth and Fourteenth, southwest	20	4,844							
West side Fourteenth	B south and Pennsylvania avenue			18,880.67	8,144.28	27,024.95				
West side Fourteenth	Pennsylvania avenue and K, northwest	24	2,312							
	INTERSECTIONS.									
	First and F, northeast	6	34	15.38	25.28	40.66				
	Second and F, northeast	6	99	50.54	51.03	101.57				
In alley	F and G, North Capitol and First	6	57	32.20	20.59	52.79				
	Eleventh and N, southeast	6	28	12.38	24.78	37.16				
	Fifteenth and Maryland avenue, northeast	6	175	85.57	71.03	156.60				
	New Jersey avenue and Q, northwest	6	20	9.20	23.53	32.73				
	Fifth and Q, northwest	6	20	9.20	23.53	32.73				
	Ninth and S, northwest	6	40	24.01	18.71	42.72				
	Eighth and T, northwest	6	69	37.00	32.78	69.78				
	Four-and-a-half and I, southwest	6	48	21.03	22.46	43.49				
	Four-and-a-half and K, southwest	6	48	21.03	22.00	43.03				
	Four-and-a half and O, southwest	6	48	21.09	23.92	45.01				
	Third and G, southwest	6	96	42.52	44.92	87.44				
	Eighteenth and New Hampshire avenue, northwest	6	48	21.03	22.46	43.49				
	New Hampshire avenue and R, northwest	6	186	89.98	87.54	77.52				
	Twenty-second and O, northwest	6	88	46.56	41.68	88.24				
	Twenty-first and O, northwest	6	48	21.03	22.96	43.99				
	Seventh and T, northwest	6	50	28.77	23.89	52.66				
	Fourteenth and Chapin	6	96							
	Fourteenth and Clifton	6	53	143.50	105.43	248.93				
	Fourteenth and Welling	6	41							
	Fourteenth and Euclid	6	52							
	Eighth and B, southwest	6	43	19.70	20.12	39.82				
	Twelfth and B, southwest	6	4	1.83	1.87	3.70				
	Thirteen-and-a-half and B, southwest	6	37	17.24	17.31	34.55				
	Third and E, northeast	6	120	61.86	56.65	118.51				
	Fifth and C, northeast	6	48	26.43	22.96	49.39				
G	North Capitol and First	6	43	30.79	20.62	51.41				
	Third and Massachusetts avenue, northeast	6	91	115.23	42.58	157.81				
	Madison and M, northwest	6	33	21.56	16.90	38.46				
	Madison and N, northwest	6	33	19.88	14.98	34.86				
	Third and F, northeast	6	231	175.78	108.60	284.38				
	North Capitol and K	6	145	83.94	68.35	152.29				
	North Capitol and I	6	58	27.38	27.14	54.52				
	First and Pierce, northwest	6	30	14.12	14.53	28.65				
	First and M, northwest	6	100	50.29	46.79	97.08				
	New Jersey avenue and Pierce, northwest	6	60	33.61	28.57	62.18				
Second	C and Canal, southwest	6	22	15.01	10.79	25.80				

† Laid on west side Fourteenth street during 1888.

‡ About 300 feet yet to be laid.

TABLE VI.—*Statement showing the cost of water-mains laid during the fiscal year* 1888–'89, *and the assessments levied therefor*—Continued.

Street.	Streets between.	Size.	Length.	Cost of material.	Cost of labor.	Total cost.	Amount of assessment.	Excess of cost over assessment.	Excess of assessment over cost.
		Inch.	*Lin. ft.*						
Second	New York avenue and Kirby	6	72	$42.92	$33.69	$76.61			
	Second and H, southwest	6	77	37.08	36.53	73.61			
	Delaware avenue and H, southwest	6	27	13.14	13.13	26.27			
	Second and D, southwest	6	120	65.71	56.65	122.36			
	Second and C, southwest	6	36	23.42	16.84	40.26			
	Seventeenth and S, northwest	6	44	25.25	20.59	45.84			
	Seventeenth and New Hampshire avenue	6	225	176.89	105.79	282.68			
	New Hampshire avenue and S, northwest	6	159	145.37	74.40	219.77			
	Seventeenth and T, northwest	6	36	16.45	17.34	33.79			
	New Hampshire avenue and V, northwest	6	244	168.21	114.68	282.89			
	New Hampshire avenue and T, northwest	6	71	33.02	33.72	66.74			
	CONNECTIONS FOR STOP-VALVES.								
In alley	M and N, Delaware avenue and Third, southwest		(*)	10.07	9.86	19.93			
South side H	Center Four-and-a-half, southwest		(*)	40.87	40.78	81.65			
In alley	First and Delaware avenue, D and E	6	3	10.53	12.53	23.06			
	Seventh and East Capitol	6	6	48.09	41.03	89.12			
		4	17						
	Nineteenth and N, northwest			22.09	21.53	43.62			
Boundary	Fourteenth and Fifteenth	6	4	22.17	20.03	42.20			
		4	20						
Alley	Twelfth and Thirteenth, K and L, southeast	6	3	13.90	10.78	24.68			
Total				54,927.22	24,414.94	79,342.16	$46,781.32	$4,954.00	$21,696.89

* Fitting only used.

Cost of erecting fire hydrants:		
Material		$3,277.42
Labor		956.47
Repair to cuts in improved pavements		119.39
Total		4,353.28
Cost of laying mains, intersections, and connections:		
Material	$36,046 55	
Material 20 and 24-inch main, Fourteenth street, west	18,880.67	
		$54,927.22

Labor			
Repairs to cuts in improved pavements	16,137.10		
Labor, 20 and 24 inch main, Fourteenth street, west	133.56		
Repairs to concrete, 20 and 24 inch main, Fourteenth street, west	6,299.64		
	1,844.64		
		24,414.94	
			79,342.16
Total cost laying mains, intersections, and erecting fire hydrants			83,695.44
Total assessment levied in consequence of these mains			46,781.32
Excess of cost over assessment			36,914.12

REVENUES.

The following is the schedule under which water-rents have been collected during the current fiscal year:

DOMESTIC RATES.

The rates for domestic purposes will be charged according to stories and front feet.

On all tenements two stories high, with a front width of 16 feet or less, $3.50 per annum.

For each additional front foot, or fraction thereof, 25 cents.

For each additional story, or part thereof, one-third of the charges as computed above.

SPECIAL BUSINESS AND MISCELLANEOUS RATES.

In every case where dwelling-houses or tenements are occupied also for business purposes, or *vice versa*, the regular charge for domestic purposes according to the above rates will be made, and in addition thereto the special business rate, as hereinafter specified.

Special and miscellaneous business will be charged at the following rates, viz:

Bakeries, from $3 to $30 per annum.

Barber-shops, first chair, $3; each additional chair, $1.50 per annum.

Bar-rooms and restaurants, from $15 to $50 per annum.

Billiard-rooms, from $5 to $20 per annum.

Boarding and tenement houses will be charged at a rate in accordance with the stories and front feet, and in addition thereto 50 cents per annum for each and every room over and above the number of three rooms in said boarding-house or tenement.

Boarding-schools and school houses, from $5 to $10 per annum.

Brick-yards, $10 to $50 each per annum, according to production. Machinery and horse-power extra, at regular rates.

Building purposes, for each one thousand bricks laid, 3 cents per thousand. Special rates will be charged for public works.

Clubs and club-rooms, according to fixtures.

Depots, locomotive engines taking water once per day, $75; twice per day, $150; the building, extra, according to number of offices, bars, and refreshment rooms; water-closets and urinals, $3 each.

Dye houses, $5 to $30 per annum. Machinery taking water, extra.

Eating-houses, from $8 to $20 per annum.

Fixtures in business establishments as follows: Wash basins, water closets, and urinals, $3 each per annum.

Florists will be charged at the rate of from $5 to $20 per annum, according to the size of the premises.

Horses, private, for each and every horse, $1.50, said sum to include water for washing carriages.

Hotels, $1 for each bed or furnished room; bar, billiard-rooms, barber-shops, offices, stores, and machinery taking water, extra.

Laundries, $5 to $30, according to general business.

Machinery using water, according to the rates for stationary engines and boilers.

Mills, $5. Machinery extra, according to the rates for stationary engines.

Market-houses, 50 cents per stall.

Offices, $3 per annum.

Printing-houses, from $5 to $10 per annum, according to the number of presses. Machinery in same using water will be charged, in addition thereto, according to the rate for stationary engines.

Private fountains will not be permitted to use Potomac water under any circumstances.

Photograph galleries, $10 to $20.

Public baths, $4 per annum, for each and every tub.

Stables. All stables for animals for livery, hack, express, cab, street-car, draught, sale, dairy, or other purposes, will be charged at the rate of 75 cents per stall.

Stationary engines, $3 per horse-power. Boilers without engines, $1.75 per horse-power.

Stores, shops, confectioneries, warehouses, and mills, $1 to $30 per annum.

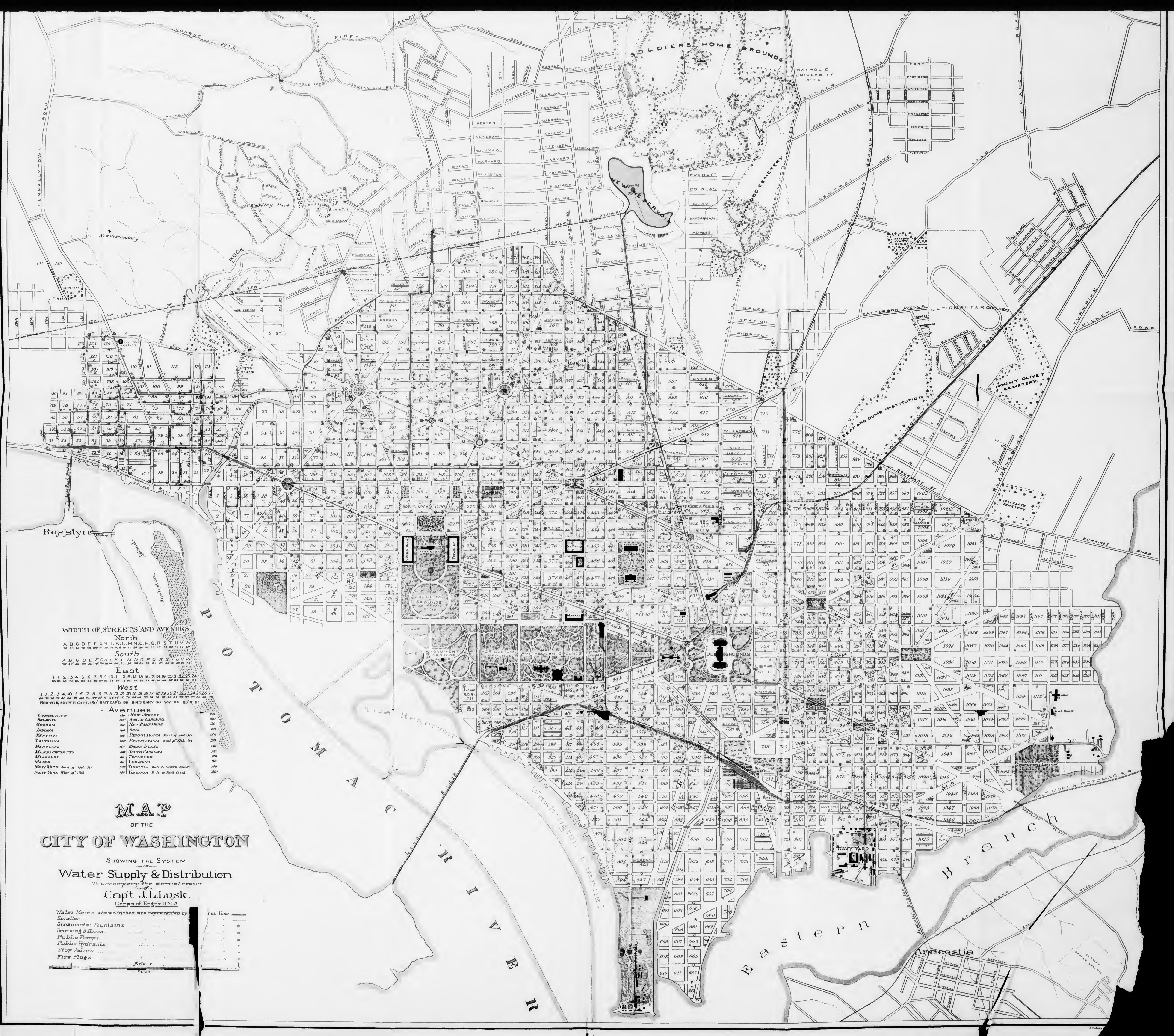
Steam-boats, according to tonnage; 50 tons and under, $25; over 50 tons, $50.

Street-washers, where parties use same, and water is not taken in the house, will be charged at rates from $3 to $10 per annum, according to nozzle or tap, and may be used only between 5 and 6 a. m. and 7 and 8 p. m.

Slaughter-houses, from $5 to $20 per annum, according to general business. Machinery taking water, extra, according to rates for stationary engines.

Swimming-baths, manufactories, paper-mills, or any other business requiring a large supply of water, will be required to use a meter, and will be charged at the rate of 3 cents for each and every thousand gallons of water used.

MAP
OF THE
CITY OF WASHINGTON
SHOWING THE SYSTEM
OF
Water Supply & Distribution
To accompany the annual report
of
Cap't J.L.Lusk.
Corps of Engrs U.S.A
WIDTH OF STREETS AND AVENUES
North
South
East
West
NORTH & SOUTH CAP'L 130' EAST CAP'L 160' BOUNDARY 80' WATER 60' & 80'
Avenues
Connecticut 130
Delaware 160
Georgia 160
Indiana 160
Kentucky 120
Louisiana 160
Maryland 160
Massachusetts 160
Missouri 80
Maine 80
New York East of 15th Str 130
New York West of 17th 160
New Jersey 160
North Carolina 160
New Hampshire 120
Ohio 160
Pennsylvania East of 15th Str 160
Pennsylvania West of 17th Str 130
Rhode Island 130
South Carolina 160
Tennessee 120
Vermont 130
Virginia Mall to Eastern Branch 160
Virginia E St. to Rock Creek 130
POTOMAC RIVER
Tidal Reservoir
Washington Channel
Long Bridge
Eastern Branch
Rosslyn
Aqueduct Bridge
Analostan Island
Rock Creek
Woodley Park
New Observatory
Oak Hill Cemetery
High Service Reservoir
Tennallytown Road
Nourse Road
Klingle Ford Road
Piney Branch
Broad Branch Road
Soldiers Home Grounds
Rock Creek Church Cemetery
Military Cemetery
Catholic University Site
New Reservoir
Glenwood Cemetery
Harewood Ave
Lincoln Ave
Bates Road
Sargent Road
Chapel Road
Bunker Hill Road
North Avenue
Central Ave
South Ave
Metropolitan Branch B&O RR
Brentwood Road
Harmony Cemetery
National Fair Grounds
Patterson Avenue
Mount Olivet Cemetery
Deaf and Dumb Institution
Graceland Cemetery
Bladensburg Road
Benning Road
Hickey Road
Turnpike
Boundary St
Line of New Aqueduct
Executive Mansion
Executive Grounds
S.W. & N. Depts
Treasury
Monument Grounds
Agricultural Grounds
Smithsonian Grounds
Armory Square
Capitol Grounds
Library Site
Judiciary Sq
Pension Office
Pat Office
Market
Gov't Print Office
Lincoln Square
Garfield Park
Navy Yard
Jail
Alms House
Congressional Cemetery
Baltimore & Potomac R R
Observatory



MAP
OF THE
CITY OF WASHINGTON
SHOWING THE SYSTEM
OF
Water Supply & Distribution
To accompany the annual report
of
Cap't J. L. Lusk.
Corps of Eng'rs U.S.A
Water Mains above 6 inches are represented by
nes thus
Smaller
Ornamental Fountains
Drinking & Horse
Public Pumps.
Public Hydrants
Stop Valves
Fire Plugs
SCALE
FEET
WIDTH OF STREETS AND AVENUES
North
A. B. C. D. E. F. G. H. I. K. L. M. N. O. P. Q. R. S. T. U. V. W.
South
A B C D E F G H I K L M N O P Q R S T U V W
East
West
NORTH & SOUTH CAP'L 130' EAST CAP'L 160' BOUNDARY 80' WATER 60' & 80'
Avenues
CONNECTICUT 130'
DELAWARE 160'
GEORGIA 160'
INDIANA 160'
KENTUCKY 120
LOUISIANA 160'
MARYLAND 160'
MASSACHUSETTS 160'
MISSOURI 80
MAINE 80'
NEW YORK East of 15th Str 130'
NEW YORK West of 17th 160
NEW JERSEY 160
NORTH CAROLINA 160
NEW HAMPSHIRE 120
OHIO 160
PENNSYLVANIA East of 15th Str 160
PENNSYLVANIA West of 17th Str 130
RHODE ISLAND 130
SOUTH CAROLINA 160
TENNESSEE 120
VERMONT 130
VIRGINIA Mall to Eastern Branch 160
VIRGINIA B St to Rock Creek 130
POTOMAC RIVER
Eastern Branch
Analostan
Rosslyn
Anacostia
NAVY YARD
CAPITOL GROUNDS
MONUMENT GROUNDS
Tidal Reservoir
Washington Channel
SOLDIERS HOME GROUNDS
CATHOLIC UNIVERSITY SITE
NEW RESERVOIR
GLENWOOD CEMETERY
MOUNT OLIVET CEMETERY
DEAF AND DUMB INSTITUTION
NATIONAL FAIR GROUNDS
PATTERSON AVENUE
ROCK CREEK
PINEY BRANCH
TENNALLYTOWN ROAD
New Observatory
BENNINGS ROAD
HICKEY ROAD
BALTIMORE & POTOMAC R.R.

All water required for purposes which are not specified in the foregoing tariff, shall be paid for at such rate as may be fixed by the Commissioners.

The total collections for 1889 were $246,454.13, and the refundments amounted to $1,209.69. Both water-rents and water-main taxes fell somewhat below the respective estimated receipts for the year.

THE NEW MAIN ON FOURTEENTH STREET.

This main, extending from Fourteenth and K streets, northwest, to Tenth and B streets, southwest, was completed on November 23, 1888. Twenty-four-inch pipe was used between K street and Pennsylvania avenue, and 20-inch pipe on the rest of the line.

Immediately upon its completion the water was turned on, with the effect of affording fairly satisfactory pressures to southwest Washington, which, for a time, has been the most poorly supplied section in the city.

The total expenditure on account of this work was $27,542.78. By law the whole of this sum is chargeable against the water-revenues for the current fiscal year. No water-main-tax was assessable along the line of this main, which was laid in large measure to benefit establishments belonging to the United States. Its cost unduly cripples the earning power of the water-division, since a like amount spent in laying service-mains would have insured the collection of considerable tax during the year. To keep this expenditure from causing public inconvenience on a large scale, by preventing the laying of service-mains where they have been applied for and ordered, I recommend that further legislation be asked, to the effect that but one-half the cost be charged against the revenues for the current year, and the other half against those of 1891.

INTEREST AND SINKING-FUND.

The fixed charges now aggregate somewhat more than one-half the annual income of the water-fund from all sources. The charges for 1890 upon water-stock bonds amount to $44,610, and for increasing the water supply to $81,402.81. These obligations, together with the necessity of returning this year to the United States Treasury the whole cost of the new Fourteenth street main, or nearly $28,000, will put it out of the power of the water-division to do more during the year than to maintain and keep in repair the existing system of distribution and to provide for a limited number of new service-mains and fire-hydrants.

These fixed charges constitute a heavy burden upon the water-division and prevent the undertaking of necessary improvements and extensions, as set forth elsewhere.

Means of freeing the water-fund from this load, partially or entirely, have been suggested as follows:

(1) That the United States shall assume the entire cost of increasing the water supply.

(2) That the United States shall abolish or lessen the interest charges on account of increasing the water supply.

(3) That the general taxes shall bear a portion or the whole of these fixed charges, and that the water-rents for domestic purposes shall be abolished, the water-main taxes and rents for business purposes being credited to the general fund.

There seems to be a strong public sentiment in favor of the first or the third of the above measures, and action should undoubtedly be taken to test the willingness of Congress to provide the corresponding legislation.

METERS.

Of these sixty are now in service, a gain of forty-six since the last annual report.

The kinds and sizes are shown in the following table:

Size.	Crown.	Thomson.	Worthington.	Total.
¾-inch			1	1
1 inch	4		13	17
1½ inch	6		12	18
2-inch	5	2	8	15
3-inch	3		3	6
4-inch			2	2
6-inch	1			1
Total	19	2	39	60

As a general rule, a reduction of water-rent has been found to follow the introduction of meters. The contrary is the result in very few instances.

The increase in the number of meters in service renders legislation necessary to protect the District from any attempt to make fraudulent use of Potomac water by causing the flow to pass around the meter without permission from proper authority. Provisions similar to those in force concerning gas meters would have the needed effect.

FIRE HYDRANTS.

Of these forty-five were erected during the year. The chief of the fire department estimates the additional number actually needed at not less than five hundred. The water department can not expect, from lack of funds, to put in service more than fifty hydrants during the current fiscal year, and possibly the same number the following year.

The use of these hydrants by street sprinklers, contractors on public works, and the District laborers is constantly spreading, and is now a serious evil. The hydrants are used many times more than they should be, and their repair is an item of large annual expense.

Just as soon as the necessary funds can be spared, a number of small stand-pipes or cranes should be erected, and the use of the fire hydrants by others than the firemen and the employés of the water department strictly prohibited.

EXTENSION OF DISTRIBUTION SYSTEM.

The lines of new supply mains proposed in last year's report must be modified on account of the laying of the 48-inch main, which was not then foreseen.

A 24-inch pipe should be laid from New Jersey avenue eastward along L street, to maintain the pressure in the northeastern section of the city.

As the area served by the stand-pipe increases, a supply main of larger diameter must be laid through the high ground supplied. The stand-pipe itself may have to be moved, in order not to be in the way of the extension of the streets, and it may possibly require an addition to its height in order to give an increase of pressure.

The supply main to Anacostia should also be laid as soon as possible.

These improvements can not be undertaken during the current year.

HIGH SERVICE.

his is divided into three distinct areas: The first, in Georgetown, by direct pumping, the reservoir at Thirty-second and being utilized to a certain extent for storage purposes; the much the largest, is served by direct pumping from the U , and the third by the stand-pipe on Sixteenth street, at night by one of the U street engines.

ng plant at the U street station has continued to work sat- d the pressures in the area supplied by it have been well During the past year changes were made in the arrange- pply and discharge mains, so that the engines can now ently in case of fires occurring simultaneously in the area ct pumping and in that fed by the stand-pipe.

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LOW SERVICE.

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s presented a map showing the distribution system as it vember 1, 1889.

PETITIONS FOR SERVICE MAINS.

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3-inch	3	
4-inch		
6-inch	1	
Total	19	

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[illegible]-Lithographer Washington, D.C.

HIGH SERVICE.

This is divided into three distinct areas: The first, in Georgetown, is supplied by direct pumping, the reservoir at Thirty-second and Road streets being utilized to a certain extent for storage purposes; the second, and much the largest, is served by direct pumping from the U street station, and the third by the stand-pipe on Sixteenth street, which is filled at night by one of the U street engines.

The pumping plant at the U street station has continued to work satisfactorily, and the pressures in the area supplied by it have been well maintained. During the past year changes were made in the arrangement of the supply and discharge mains, so that the engines can now work independently in case of fires occurring simultaneously in the area supplied by direct pumping and in that fed by the stand-pipe.

The single-acting Knowles pump at the Georgetown station has become overtaxed, and its place has been taken by the Blake pump, removed last year from the U street station. The latter pump is wasteful of fuel, and should be superseded by modern engines as soon as funds can be spared for the purpose.

The stand-pipe area has been well supplied without calling upon the engines for any pumping by daylight. The Washington high service, excepting the area depending upon the stand-pipe, will be almost entirely transformed when the new 48-inch main is brought into service. The area in Washington to be supplied by direct pumping will then be greatly diminished.

On the other hand the Georgetown high-service area will not be sensibly affected.

LOW SERVICE.

As stated elsewhere, the completion of the new main on Fourteenth street, west, in large measure relieved the scarcity of water in the southwest section, thereby bringing a portion of Capitol Hill into especial prominence as the most poorly supplied area. With constant attention to the suppression of waste, and prompt repair of leaks, the reduction in pressure has not been material, considering the great extension of service mains during the year.

The completion of the 48-inch main will require an entirely new arrangement of valves along certain mains, in order to suitably divide the territory served by the 48-inch, the 36-inch, and 30-inch mains into a high and a low service area, both supplied by gravity.

Herewith is presented a map showing the distribution system as it existed on November 1, 1889.

PETITIONS FOR SERVICE MAINS.

The existing law on this subject is extremely objectionable. In the first place, it enables non-resident owners of lots, or those who hold land merely for speculative purposes, to defeat the petitions circulated by their more enterprising neighbors, and thus deprive the latter for years of a supply of flowing water. It also prevents the Commissioners, except upon presentation of the necessary petitions, from laying mains or erecting fire-plugs even in districts the most likely to suffer from damage by fire; and renders impossible the extension of the distribution system upon any regular plan, since the mains must follow the petitions, and the latter are presented in the most hap-hazard manner. Finally, in many cases it greatly increases the cost of laying service mains by postponing the work until the streets are paved and all other improvements are completed.

The Commissioners are intrusted by Congress with the power of ordering the construction of pavements and sewers where they are necessary for the public safety, comfort, or health. The grant of like power with respect to water mains would seem to be most natural and reasonable, and would put an end to a condition of affairs which yearly works injustice to thousands of citizens and adds to the expense of laying mains without any corresponding benefit. The repeal of the existing law should be pushed in the interest of good administration.

PUBLIC PUMPS.

The appropriation for this purpose was $4,000. Forty-three new pumps were erected, eleven wells were abandoned after careful and repeated analyses of the water, forty-seven wells were cleaned, and repairs were made to pumps in four hundred and fourteen instances.

For the next fiscal year not less than $5,000 should be appropriated for this purpose.

LIGHTING DIVISION.

As stated above, the general charge of this division was transferred from Capt. Thomas W. Symons to myself on April 1, 1889.

For details concerning the operations of the year, reference is invited to the accompanying report of Mr. W. H. Harrison, superintendent of lamps. This officer has performed his duties with intelligence and fidelity. His salary, now $1,000, should undoubtedly be increased to $1,200 per annum.

GAS AND OIL LAMPS.

The appropriation for this purpose for the fiscal year under consideration was $105,000. It is accounted for in the following statement:

Appropriation for street lighting, fiscal year ending June 30, 1889.

Date.	Receipts.	Amount.	Date.	Expenditures.	Amount.
1888.			1889.		
July 1.	To appropriation	$105,000.00	June 30.	By Washington Gas Light Company, for street lighting to date	$87,075.96
	Baltimore and Potomac Railroad Company, amount refunded	1,384.97		By Georgetown Gas Light Company, for street lighting to date	8,350.95
	Baltimore and Ohio Railroad Company, amount refunded	571.60		By Wheeler Reflector and Light Company, for street lighting to date	1,176.49
	John Dugan, lantern destroyed	4.75		By Washington Gas Light Company, for erecting and moving lamps	3,263.71
				By Georgetown Gas Light Company, for erecting and moving lamps	232.80
				By George White & Sons, for purchase of lamp-posts	3,395.70
				By Wheeler Reflector and Light Company, for purchase of lanterns	2,299.00
				By H. I. Gregory, for purchase of street designations and frames	624.00
				By Conrad Kaufmann, for repairing and repainting lanterns	141.90
				By pay-rolls, expense for erecting posts for oil lamps	142.00
				Balance	258.81
		106,961.32			106,961.32

For the current year the appropriation for lighting with oil and gas (or other material) is $115,000. For the fiscal year 1891 there should be appropriated $131,600. If the number of hours of lighting is increased to 3,000 the appropriation should be $152,000.

During the year the gas-lighting east of Rock Creek was up to the standard. The contrary was true of many lamps west of that stream, a fact due partly to the existence of certain mains of insufficient capacity, and partly to the lack of suitable burners. The attention of the company concerned has been drawn to these defects, with fairly satisfactory results.

It is believed that the District Commissioners should have some control over the size of gas-mains to be laid in the streets, and legislation should be sought which would secure this control. Furthermore, no main of this kind should be permitted to be laid without a definite location of the same, approved by the Commissioners before the laying is authorized.

The use of oil lamps in certain alleys, streets, and roads where no gas-mains exist has been continued with satisfactory results.

Oil lamps were erected and put in service as follows:

Northwest	22
Northeast	23
Southwest	92
Southeast	15
Suburban roads and streets	22
Total	174

Number of lamps in service July 1, 1888	4,710
New lamps lighted during year	43
Lamps relighted during year	22
Discontinued during year	224
In service June 30, 1889	4,941

The following table shows the distribution of the gas lamps erected during the year, according to sections:

Section.	Number erected.	Cost.
Northwest	171	$1,427.64
Northeast	61	469.70
Southeast	10	77.00
Southwest	67	568.40
Georgetown	14	107.80
Suburban roads and streets	49	374.30
Total	372	3,024.84

Sixty-nine gas-lamps were moved during the year, on account of changes of grade or in width of sidewalk. The total expense of these changes was $471.67.

Lamps moved, fiscal year 1889.

Northwest section	7
Northeast section	3
Southeast section	27
Southwest section	20
Georgetown	6
Suburban streets and roads	6
Total	69

The oil and gas lamps were lighted 2,600 hours during the year. The appropriation should be sufficient to allow an increase to at least 3,000, and if possible 3,200 hours per year.

The principal defect in the present system of gas lighting is that the lamps are entirely too far apart on many of the streets. This evil can be gradually remedied without incurring too great an expense during any one year.

Particular attention must also be paid to keeping the foliage trimmed on trees adjacent to the lamps. In mid-summer no little interference with the lighting of certain streets is experienced on this account.

ELECTRIC LIGHTING.

The appropriation for this purpose for 1889 was $30,000, and for 1890, $40,000. The number of lights in service June 30, 1888, was 105, and on June 30, 1889, 177. This number has been increased during the current fiscal year to 181. In order to comply with that provision of this year's appropriation bill which requires the relighting of the south side of Pennsylvania avenue, it became necessary to cut off 13 lamps on other streets. During the next fiscal year these should be relighted, with 9 others still needed on Pennsylvania avenue. The total number of lamps to be provided for in the next appropriation should therefore be not less than 203, to maintain which, with the necessary inspection, will require $46,000.

The electric lamps were lighted 4,286 hours during the year, at a cost of 50 cents per lamp per night. The act making appropriations for the current year required all wires maintaining public lamps to be placed underground on or before September 30, 1889, a condition complied with by the contractors, the United States Electric Lighting Company.

Receipts and expenditures on account of electric street lighting during the fiscal year ending June 30, 1889.

Date.	Receipts.	Amount.	Date.	Expenditures.	Amount.
1888.			1889.		
July 1	To appropriation	$30,000.00	June 30	By United States Electric Lighting Company, for street lighting to date....	$28,850.15
				Expenses of inspection.	
				W. C. Hazel, purchase of horse.....	175.00
				McDermott Bros., purchase of buggy	225.00
				Lutz & Bros, purchase of harness, etc.....	63.75
				E. M. Talcott, inspector ..	96.00
				L. G. Stanhope, inspector ..	160.00
				A. G. McKenzie, inspector..	12.00
				Balance	418.10
		30,000.00			30,000.00

SEWER DIVISION.

The operations of this division are described at length in the appended report of Acting Superintendent D. E. McComb, who has performed his duties with faithfulness and ability.

CLEANING AND REPAIRING SEWERS AND BASINS.

The appropriation for this purpose for the fiscal year 1889 was $30,000, and for 1890, $35,000. The modern part of the sewer system successfully passed the severe trials imposed by the heavy rain-falls of last spring. Sand, mud, and gravel were, however, washed into the large sewers and the James Creek Canal to an unprecedented extent, at a time when the state of the appropriation was sufficient to do only the ordinary cleaning. This accumulation produced flooding in certain areas during the following summer; it was removed as promptly as possible after the new appropriation became available, except in the case of the James Creek Canal, for dredging which a specific appropriation of $18,000 is recommended.

The next appropriation for cleaning and repairing sewers and basins is recommended to be not less than $40,000. The larger items of repair work proposed are the Georgetown main sewer, and the trunk sewer on Fourteenth street, between H and I streets. These repairs can not safely be postponed.

REPLACING OBSTRUCTED SEWERS.

Under the appropriation for this work 7,408.3 feet of pipe sewer was replaced, of sizes varying from 8 to 18 inches. A list has recently been prepared of all the old pipe sewers which require replacement as soon as funds become available. The aggregate number of lineal feet to be replaced is about 20,000, and an appropriation of $25,000 is recommended for the purpose. The necessity of promptly executing this work is greater even than that of extending the sewerage system to reach new houses, since many of the obstructed sewers are in densely populated districts, where great inconvenience is frequently experienced from defective drainage.

The principal causes of obstruction are defects in grade, gaps left in construction, and especially roots of trees, which have entered through joints or cracks in imperfectly laid pipe sewers.

MAIN AND PIPE SEWERS.

The appropriation for the year 1889 was $70,000, and the construction for the year aggregated 39,185.2 lineal feet of sewer, varying in size from 6″ pipe to the 3′ by 4.5′ egg-shaped section. The appropriation for the current year is $90,000. This should be increased for the coming year, and estimates are presented aggregating $127,860. The items making up this estimate are given below:

Pennsylvania avenue, between Seventeeth and Eighteenth streets	$4,675
L street, northeast, Third and Boundary streets	16,885
K street, northwest, Fourth street and New Jersey avenue	12,300
Fourteenth street, southeast, from river northward	15,000
Ninth street, southeast, from river northward to N street	4,000
Improving East Boundary sewer outlet, including condemnation of right of way	15,000
Terra cotta pipe sewers	50,000
Receiving basins	10,000
Total	127,860

The sewer proposed for Pennsylvania avenue between Seventeenth and Eighteenth streets, northwest, is to replace an existing sewer which is deficient both in size and grade.

The sewer proposed for L street, northeast, and that for Fourteenth street, southeast, will provide trunk lines of drainage for rapidly developing areas of the city. That proposed for K street northwest will relieve overcharged sewers on Third and Fourth streets. That on Ninth street southeast will extend the sewer on the street named to deep water in the Eastern Branch.

The East Boundary sewer now discharges into a water course situated partly upon private property. It is proposed to deepen and straighten the channel of this stream, and to acquire possession of a strip of land of sufficient width from the outlet of the sewer to the Eastern Branch.

SUBURBAN SEWERS.

Under the appropriation of $30,000 there was constructed a total length of 11,095.22 feet of sewer, varying in size from 12-inch pipe to a concrete sewer 7.64 feet in diameter.

For the coming year there is recommended an appropriation of $86,850, to be expended as explained below:—

Extension of sewer on Bladensburgh road	$3,850
Extension of sewer on line of Eleventh street, northeast	15,000
Extension of sewer in Eckington Valley	15,000
Construction of sewer on Lincoln avenue	3,000
Construction of sewer on Fourteenth-street road	18,000
Extension of sewer in Rock Creek Valley	10,000
Extension of Anacostia main sewer	7,000
Construction of pipe sewers	15,000
Total	86,850

The proposed sewer on the Bladensburgh road is intended to carry drainage which now flows through the deep ravine on the west side of that road.

The sewer proposed to extend northward from Boundary and Eleventh street, northeast, will provide for drainage and sewage which now produce a nuisance in the open stream in the vicinity. Lincoln avenue and a portion of R street eastward from that avenue are to be drained by the sewer along the latter.

The sewer on Fourteenth-street road is intended to provide for the surface drainage of the greater part of Mount Pleasant, and will divert storm water which sometimes overcharges the sewer on Eighth street, west.

The construction of the Anacostia main sewer is required as a preliminary to the improvement of Adams and Jackson streets.

It is proposed to push the Rock Creek Valley intercepting sewer as far as Massachusetts avenue extended.

PERMIT SEWERS.

The allotment for this class of work was $25,000. Twenty-seven thousand nine hundred and thirty-nine linear feet of pipe sewer was constructed, of sizes varying from 12 to 24 inches. An allotment of $35,000 is recommended for the ensuing year.

GAUGING SEWERS AND RAIN-FALL.

I urgently recommend the appropriation of $3,000 for gauging the storm discharges of some of the more important sewers, contemporaneously with observations of the rain-fall over the respective areas drained.

This is necessary in order to determine some definite relation between the areas and the size of the sewers necessary to drain them. The present practice of proportioning large sewers, here as elsewhere, is based on general assumptions, which can not be depended upon to fit particular cases. Accurate knowledge is needed on this point in order that the sewers may be built as large as is necessary to perform their work, and no larger.

SEWAGE DISPOSAL.

The act providing for the expenses of the District for the fiscal year 1889 contains an appropriation of $5,000 "for the preparation of plans for sewage disposal." This sum, while entirely insufficient for the purpose, could not be wholly expended during the last fiscal year, owing to the lateness of the time when it became available and to the exceptional rain-falls of last spring, which precluded the making of certain necessary measurements. About one-half of the appropriation remained unexpended at the end of the year, and was considered as available for work during the current year, since the act was passed for a specific purpose. Upon the decision of the accounting officers, however, the balance was covered into the United States Treasury. As a result, the preparation of the plans and estimates will necessarily be delayed and their scope much curtailed. It is fortunate, in this connection, that a board composed of eminent civil and sanitary engineers, appointed by the President, is engaged in making a study of the entire sewerage question, and must necessarily include the disposal of the sewage as one of the main features of its investigation.

DELAYS IN CONSTRUCTION.

Many obstacles to satisfactory progress in sewer-building have been encountered during the current fiscal year. The most important of these was a successful suit brought to restrain the Commissioners from making an award upon the first opening of bids for terra-cotta pipe and branches. The decision of the court led to a rejection of all bids and a first and second re-advertisement for proposals. As a result the District will be obliged to pay for this material much higher prices than last year, or what would have been paid under the first award of this year. The work of construction has also been seriously impeded and many houses have been kept an unduly long time without necessary drainage.

Further delay in certain classes of this work was caused by the death of one member of a firm of successful bidders, by the default of another bidder, and the unwillingness of still another to undertake certain work awarded him by the Commissioners. The inability of the railroads to properly handle the large quantities of freight thrown upon them this fall has also seriously impeded the work of the sewer division.

STREET-SWEEPING AND THE SEWERS.

The present method of sweeping the streets might be modified with great advantage to the sewers and to the streets themselves. As now performed the latter are never clean, except for a few hours immediately after they are swept. Dirt is most conspicuous and unsightly on the smooth surface of the asphalt pavements. Every rain of any intensity washes quantities of horse-droppings and other filth into the sewer inlets, greatly multiplying the work of cleaning them, and fre-

quently giving rise to offensive odors, in spite of repeated cleansing and flushing.

I believe that the busiest streets can be kept in much better condition than at present, if attention be paid to keeping them fairly clean instead of giving them a sweeping once a night, at the most, and neglecting them during the whole period of daylight. In some other cities this end is accomplished by employing men or boys to collect from the carriageways all dirt or filth dropped during the day, and to deposit the same in receptacles provided for the purpose.

I recommend that an experiment be tried in this direction, upon a sufficient scale to demonstrate whether it is practicable and economical. The streets of Washington are too beautiful to be allowed to grow dirtier and dirtier with the advancing hours of each day, if they can be kept clean at moderate expense.

A certain amount of sweeping would still be needed under the modifications proposed, but it is believed that any increase in cost would be amply repaid to the public in the improved condition of the sewer inlets and streets.

ORGANIZATION OF THE SEWER DIVISION.

The work of this division includes the designing, construction, repair, and maintenance of sewers. This work is necessarily continuous from year to year, and the need of a permanent organization is apparent. I recommend that a specific appropriation be made to effect this end upon the following basis:

Superintendent of sewers	$2,400
General inspector	1,500
2 clerks	2,400
2 assistant engineers	3,000
2 rodmen	1,560
2 axmen	1,300
2 inspectors of property	1,868
2 sewer tappers	2,400
1 permit clerk	1,200
1 draughtsman	1,500
Total	19,128

I inclose herewith a map of the sewerage system as it existed on November 1, 1889.

The following is a summary of the estimates for the sewer division for 1891:

Cleaning and repairing sewers and basins	$40,000
Replacing obstructed sewers	25,000
Main and pipe sewers	127,860
Suburban sewers	86,850
Dredging James Creek Canal	18,000
Compulsory sewerage and permit work*	25,000
Gauging sewers and rain-fall	3,000
Sewer-division salaries	19,128
Total	354,838

If specific provision be not made for the salaries of the employés of the sewer division, the four items at the head of this list should be increased to cover the same as follows:

Cleaning and repairing sewers and basins	$42,733
Replacing obstructed sewers	26,708
Main and pipe sewers	136,604
Suburban sewers	92,793

* By allotment from appropriation for permit work.

MAP OF THE CITY OF WASHINGTON

WIDTH OF STREETS AND AVENUES

North
A B C D E F G H I K L M N O P Q R S T U V W
90 100 110 70 80 90 100 110 120 130 140 150 160 70 80 90 100 110 120 130 140 150

South
A B C D E F G H I K L M N O P Q R S T U V W
90 100 110 70 80 90 100 110 120 130 140 150 160 70 80 90 100 110 120 130 140 150

East
1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
80 100 90 80 70 80 90 100 80 90 100 80 90 100 80 90 100 80 90 100 80 90 100 80 90

West
1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
80 90 100 110 80 90 100 80 85 90 95 80 85 90 95 100 110 120 130 140 150 160 80 90 100 80

NORTH & SOUTH CAPL 130 EAST CAPL 160 BOUNDARY 80 WATER 80

Avenues

Connecticut	130	New Jersey	120
Delaware	110	North Carolina	120
Georgia	160	New Hampshire	120
Indiana	160	Ohio	160
Kentucky	120	Pennsylvania East of 13th	130
Louisiana	160	Pennsylvania West of 13th	150
Maryland	110	Rhode Island	160
Massachusetts	160	South Carolina	120
Missouri	160	Tennessee	150
Maine	160	Vermont	160
New York East of 15th Str	130	Virginia Mall to Eastern Branch	160
New York West of 17th	160	Virginia E. B. to Rock Creek	130

Rosslyn

Analostan

Potomac

Tidal Reservoir

Washington Channel

Eastern Branch

Rock Creek

Piney Branch

Broad Branch

Tennallytown Road

Nourse Road

Klingle Road

Woodley Road

Quarry Road

Linnean Hill Road

Spring Road

Bladensburg Road

Boundary St.

Bennings Road

Bunker Hill Road

North Avenue

South Avenue

Michigan Avenue

Rhode Island Avenue

Brightwood Avenue

Chain Bridge Road

Chapel Road

Baltimore & Potomac R.R.

Metropolitan Branch B. & O. R.R.

Turnpike

Higley Road

Rock Creek Church Cemetery

Military Cemetery

Soldiers Home Grounds

Catholic University Site

New Reservoir

Old Cemetery

Mount Olivet Cemetery

Deaf and Dumb Institution

Soldiers Cemetery

National Fair Grounds

Patterson Avenue

Oak Hill Cemetery

New Observatory

Rawlley Park

Executive Grounds

Monument Grounds

Agricultural Grounds

Smithsonian Grounds

Capitol Grounds

Congressional Cemetery

Navy Yard

Library Site

Post Office

Treasury

Armory

Barracks

Market

Jail

Penitentiary

Observatory

Public Buildings

Public Reservations

Cemetery

Canal

Aqueduct

Bridge

Ferry

Line of 13th St. E. & W.

Line of 15th St. E. & W.

Line of 17th St. E. & W.

Line of 7th St. E. & W.

Line of 9th St. E. & W.

Line of 11th St. E. & W.

Line of 129 Line

Line of 131 Line

MAP
OF THE
CITY OF WASHINGTON
SHOWING THE LOCATI
OF
Sewers.
Jan. 1st. 1890.
To accompany the annua. report
—of—
Capt J.L. Lusk
Corps of Engr's U.S.A
Brick Sewers are represented by heavy lines by figures showing their sizes
Pipe " " fine " their sizes being from 12 to 24"
Catch Basins " " dots "
SCALE
FEET
WIDTH OF STREETS AND AVENUES
North
South
East
West
NORTH & SOUTH CAP'L 130' EAST CAP'L 160 BOUNDARY 80 WATER
Avenues
CONNECTICUT 130'
DELAWARE 160'
GEORGIA 160
INDIANA 160'
KENTUCKY 120
LOUISIANA 160
MARYLAND 160
MASSACHUSETTS 160
MISSOURI 80
MAINE 80
NEW YORK East of 15th Str 130
NEW YORK West of 17th 160
NEW JERSEY 160
NORTH CAROLINA 160
NEW HAMPSHIRE 120
OHIO 160'
PENNSYLVANIA East of 15th 160'
PENNSYLVANIA West of 17th 130'
RHODE ISLAND 130
SOUTH CAROLINA 160
TENNESSEE 120
VERMONT 130'
VIRGINIA Mall to Eastern Branch 160
VIRGINIA B St to Rock Creek 130'
SOLDIERS HOME GROUNDS
CATHOLIC UNIVERSITY SITE
NEW RESERVOIR
NATIONAL FAIR GROUNDS
MOUNT OLIVET CEMETERY
DEAF AND DUMB INSTITUTION
Rosslyn
POTOMAC RIVER
Tidal Reservoir
Washington Channel
Eastern Branch
NAVY YARD
Anacostia
New Observatory
ROCK CREEK
BALTIMORE & POTOMAC R.R.

STORE-HOUSE FOR CEMENT.

Soon after the beginning of the current fiscal year the Commissioners authorized the building of a shed for storing hydraulic cement. This has just been completed. During the coming winter this building will be filled with cement, and its capacity justifies the hope that the many annoying and vexatious delays in securing an adequate supply of this class of material will no longer be experienced. It will also render possible the making of a thorough and reliable series of tests of the cements which come to this market, and will practically insure to the District works the use of an even product. The cement is the very life of the construction into which it enters, and no effort to guaranty its quality can safely be spared.

INSPECTOR OF ASPHALT AND CEMENTS.

Attention is invited to the very full and interesting report of this officer for valuable details of tests and analyses of building and paving materials, water from wells and springs, and from the river, the reservoirs, and the mains. With increased facilities for storing hydraulic cements, it has been possible to enter upon a systematic course of tests which will insure greater regularity and certainty than hitherto in the use of materials of this class.

SURVEY OF THE DISTRICT.

The progress of this work is shown by the following table:

	1887–'88.	1888–'89.
Sheets photolithographed	19	21
Sheets of field-work completed	8	9
Sheets of field-work partially completed	21	22
Sheets not commenced	12	8
Total	60	60

(1) Permanent bench-marks established on lines of level heretofore run	48
(3) Stones planted on standard lines of level run since September 1, 1888	37
(4) Bench-marks established on other permanent objects and duly described in record books	343
(5) Miles of standard levels run forward and backward	78
(6) Acres of topography surveyed during the year	4,185

The rainy weather of the spring and early summer so greatly retarded the outdoor work as to render its completion impossible during the current fiscal year. Three parties were in the field nearly the whole of the past year, and a fourth was added for several months.

During the year the Coast Survey Office has sent to the engineer department advance tracings and blue-prints which have been of great assistance in making extensions of streets and avenues, and in projecting works of construction.

The Superintendent of the Coast and Geodetic Survey estimates that $10,000 will complete the project as orginally contemplated, and enable a good beginning to be made upon that portion of the old District which was receded to the State of Virginia. It is highly desirable that the survey of the latter should be entered upon and completed as soon as possible.

INSPECTOR OF GAS AND METERS.

The report of this officer contains a full statement of the tests made during the year of the illuminating power, purity, and pressure of the gas supplied by the Washington and Georgetown Gas Companies.

Particular attention is invited to his recommendations concerning a new testing laboratory, the appointment of an assistant inspector, and the amendment of the existing law, so as to secure the retesting of sealed meters, the heads of which have been removed by the gas companies.

I forward herewith the respective annual reports of the superintendent of the water division, the superintendent of lamps, the superintendent of sewers, the inspector of asphalt and cements, and the inspector of gas and meters.

Very respectfully, your obedient servant,

JAS. L. LUSK,
Captain of Engineers.

Maj. CHARLES W. RAYMOND,
Corps of Engineers, U. S. Army, Engineer Commissioner D. C.

Estimates for improvements, city and suburban, 1890–'91.

Location.	Improvement.	Estimated cost.
NORTHWEST.		
E street from Sixth to Seventh	Pave	$6,000
New York avenue from New Jersey avenue to North Capitol	do	18,000
New Hampshire avenue from T to V	do	20,000
R street from Seventh to Boundary	do	25,000
R street from Sixteenth to New Hampshire avenue	do	15,000
Twelfth street from V to Boundary	do	12,000
Boundary street from Fourth to New Jersey avenue	do	10,500
Eleventh street from O to Boundary	do	46,000
I street from Twentieth to Twenty-third	do	15,000
Fourth street from New Jersey avenue to Boundary	do	16,500
U street from Ninth to Tenth	do	5,000
Fourth street from New Jersey avenue to M	do	9,000
Twenty-fifth street from Pennsylvania avenue to K	do	5,500
Twenty-third street from I to Pennsylvania avenue	do	5,000
P street from Fourth to North Capitol	do	16,000
Corcoran or Sherman street from Eighteenth to Nineteenth	do	2,900
North Capitol street (west side) from K to M	do	10,000
Eighteenth street from New Hampshire avenue to S	do	9,000
Total northwest		247,000
SOUTHWEST.		
Delaware avenue from C to G	G. and R.	10,000
G street from One-half to South Capitol	Pave G. B.	4,000
Canal street (south side) from C to E	do	24,000
D street from First to Third	Pave	9,045
E street from South Capitol to First	do	9,625
Eighth street from B to C	do	4,000
G street from One-half to Third	do	11,330
M street from Sixth to Water	Pave G. B.	6,000
Total southwest		78,000
SOUTHEAST.		
North Carolina avenue from Sixth to Eighth	Pave	15,700
B street from First to Second	Widen and pave.	11,500
I street from Third to Eighth	G. and R.	11,400
South Carolina avenue from Sixth to Seventh	Pave	9,000
Seventh street from Virginia avenue to M	G. and R.	4,300
Tenth street from East Capitol to Pennsylvania avenue	do	14,600
C street (south side) from Fourth to Sixth	Pave	5,500
C street (north side) from Fourth to Sixth	do	5,500
G street from 11th to Pennsylvania avenue	do	10,000
B street from North Carolina avenue to Eleventh	do	10,500
B street from Eleventh to Nineteenth	G. and R.	22,000
Second street from D to G	do	7,000
Thirteenth street from E to Pennsylvania avenue	do	3,000
Total southeast		130,000

Estimates for improvements, city and suburban, 1890–91—Continued.

Location.	Improvement.	Estimated cost.
NORTHEAST.		
Maryland avenue from Thirteenth to Boundary	Pave	$30,000
Ninth street from Massachusetts avenue to Maryland avenue	G. and R.	8,300
Eighth street from I to K	do	2,400
Twelfth street from Maryland avenue to H	do	4,800
Eighth street from Maryland avenue to B	Pave	13,000
Third street from H to L	do	13,300
Ninth streets from H to Maryland avenue	do	15,000
G street from Sixth to Seventh	G. and R.	3,500
First street from C to F	Pave	15,000
Second street from F to H	do	10,300
Fourth street from C to D	do	2,200
Sixth street from C to D	do	2,200
North Capitol street (east side) from K to M	do	5,000
Boundary street from Bladensburg road to Ninth	do	5,000
Total northeast		130,000
GEORGETOWN.		
Thirty-fifth street from U to Tennallytown road	Pave	16,500
Thirty-fourth street from P to R	do	7,500
Thirty-fourth street from R to High	G. and R.	10,000
O street from Twenty-eighth to Twenty-ninth	Pave	3,000
Q street from Thirty-fifth to High	do	13,350
Prospect street from Thirty-third to High	do	9,650
Thirty-sixth street from Prospect to O	do	5,000
Total Georgetown		65,000
SUBURBAN.		
Nichols avenue from end pavement to foot of hill	Pave G. B.	13,100
Clifton street to Fourteenth extended to eastward	do	8,000
Linden street from Boundary to college	G and R.	5,000
Fourteenth street from Yale to northward	Pave	12,350
Brightwood avenue from Irving to northward	Pave G. B.	15,000
Kenesaw and Wallach from Seventh to Fourteenth	do	7,500
Howard avenue from Sixth to Seventh	do	2,000
Lincoln avenue from Boundary to Glenwood Cemetery	do	8,000
Mount Olivet road from Bladensburg road to Patterson avenue	do	2,000
California avenue from Columbia road to Massachusetts avenue	do	5,000
Brightwood avenue from Rock Creek Church road to District of Columbia line	do	10,000
Michigan avenue	do	5,000
Sherman avenue	do	5,000
North Capitol extended	do	10,000
First street, west, extended	do	5,000
Pennsylvania avenue extended—connection with Suitland road	do	15,000
Thirteenth street extended	do	5,000
Nourse road	do	2,000
Bunker Hill road from Harewood avenue to Queens-chapel road	do	5,000
Connecticut avenue extended from Columbia road to Woodley road	do	5,000
Brentwood road and Patterson avenue	do	5,000
R street extended from Lincoln avenue to Fourth	Pave	15,000
Illinois avenue	Grade	5,000
Streets of Takoma Park	do	10,000
Anacostia and Sheriff roads	do	5,000
Naylor road from Good Hope Hill to District Columbia line	do	1,500
New Cut road	do	3,000
Ridge and Loughborough roads	do	5,000
Eighteenth street extended	do	10,000
		204,450

RECAPITULATION.

County		$204,450
Georgetown		65,000
Northwest		247,000
Southwest		78,000
Southeast		130,000
Northeast		130,000
Aggregate		854,450

REPORT OF THE SUPERINTENDENT OF STREETS.

OFFICE OF SUPERINTENDENT OF STREETS,
Washington, September 28, 1889.

MAJOR: I have the honor to submit the following report of work done and expenditures under the supervision of this office during the fiscal year ending June 30, 1889:

APPROPRIATION FOR CURRENT REPAIRS TO STREETS, AVENUES, AND ALLEYS.

Labor	$30,482.18
Material	4,490.42
Total	34,972.60

SUMMARY.

Brick pavement laid	square yards..	6,709
Granite block pavement laid	do....	757
Asphalt block pavement laid	do....	549
Asphalt tile pavement laid	do....	101
Cobble and rubble pavement laid	do....	26,709
Curb set	linear feet..	6,113
Flag laid	do....	17,833
Grading	cubic yards..	4,093
Broken stone and gravel	do....	7,722
Resurfacing asphalt pavement	square yards..	39.90

APPROPRIATION FOR REGULAR PERMIT WORK.

Labor	$7,306.45
Material	14,538.36
Total	21,844.81

SUMMARY.

Brick pavement laid	square yards..	7,651
Granite block pavement laid	do....	24
Asphalt block pavement laid	do....	2,132
Asphalt tile pavement laid	do....	3,741
Cobble and rubble pavement laid	do....	1,382
Curb set	linear feet..	4,341
Flag laid	do....	1,758
Grading	cubic yards..	8,891

APPROPRIATION FOR COMPULSORY PERMIT WORK.

Labor	$15,396.77
Material	45,274.55
Total	60,671.32

SUMMARY.

Brick pavement laid	square yards..	5,484
Granite block pavement laid	do....	267
Asphalt block pavement laid	do....	21,589
Asphalt tile pavement laid	do....	2,091
Cobble and rubble pavement laid	do....	3,062
Curb set	linear feet..	2,333
Flag laid	do....	3,931
Grading	cubic yards..	12,326

APPROPRIATION FOR CURRENT REPAIRS TO BRIDGES.

Labor	$1,334.43
Material	1,330.48
Total	2,664.91

APPROPRIATION FOR ORDINARY CARE OF BRIDGES.

Labor	$1,730.30
Material	8.69
Total	1,738.99
Grand total of expenditures	121,892.63

Respectfully submitted.

H. N. Moss,
Superintendent of Streets.

Maj. CHAS. W. RAYMOND,
Engineer Commissioner District of Columbia.

REPORT OF THE SUPERINTENDENT OF ROADS.

DISTRICT OF COLUMBIA, ENGINEER DEPARTMENT,
Washington, September 19, 1889.

SIR: I have the honor to submit herewith a statement of expenditures made by my department from the various appropriations, in improving county roads, suburban streets and bridges during fiscal year ending June 30, 1889.

Very respectfully,

GEO. N. BEALE,
Superintendent of Roads.

The ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA.

Expenditures repairing county roads, etc., fiscal year 1888–'89.

Name of road.	Expended.	Name of road.	Expended.
EASTERN SECTION.		CENTRAL SECTION.	
Anacostia	$698.87	Argyle Mill	$24.00
Benning's	656.74	Bates	12.50
Bowen	101.00	Blair	828.78
Central avenue	2.50	Brentwood	448.94
Giesboro	98.50	Brown street	53.50
Good Hope	39.00	Bunker Hill	39.00
Hamilton	165.88	Carroll	16.50
Livingston	185.36	Central avenue	127.62
Monroe street	16.12	Champlain avenue	33.63
Morris	239.76	Columbia	4,282.31
Naylor	108.72	Fifteenth street extended	5.50
Nichols avenue	1,316.53	Fourteenth street	1,707.99
Polk street	132.50	Harewood	503.90
McLain	208.53	Lincoln avenue	1,811.05
Sheridan avenue	159.45	Linnaen Hill	167.24
Sheriff	150.74	Military	7.43
Stanton avenue	167.83	Mintwood Place	175.69
Stephenson avenue	91.50	Nineteenth street extended	397.74
Suit	18.75	Ninth street extended	483.43
Sumner street	23.00	Park street	546.59
T street	37.12	Prospect street	4.25
Wheeler	164.51	Queen Chapel	79.50
Walker	80.70	Riggs	1,337.54
Miscellaneous labor	898.85	Rock Creek Ford	22.87
Material (general use)	97.22	Rock Creek Church	2,106.19
Blacksmithing	29.56	Sandy Spring	349.59
Washington street (Lincolnville)	5.50	Sargent	39.75
Bell street (Lincolnville)	64.75	Brightwood avenue	2,408.95
Jefferson street (Lincolnville)	46.37	Sheridan street	33.50
Bowen street (Hillsdale)	36.25	Shepherd	606.60
Howard street (Hillsdale)	20.00	Sixteenth street extended	35.01
Maple avenue	68.74	Spring street	33.62
Navy avenue	6.37	Thirteenth street extended	50.92
Grand View avenue	11.00	Trumbull street	4.63
Bridge street	11.00	Whitney avenue	738.68
Pomeroy street	76.77	Woodley lane	2,135.54
		Miscellaneous labor	2,723.57
Total eastern section	6,235.99	Material (general use)	1,013.72

Expenditures repairing county roads, etc., fiscal year 1888-'89—Continued.

Name of road.	Expended.
CENTRAL SECTION—continued.	
Blacksmithing	$209.05
Klingle road	24.00
Eighth street extended	716.29
Belmont avenue	77.71
Howard avenue	27.25
Sherman avenue	40.50
Center street	47.75
Kenesaw avenue	102.85
Ontario avenue	33.50
Lanier avenue	44.50
Michigan avenue	2.00
Adams street	94.55
North Capitol street extended	71.50
Kalorama avenue	22.50
California avenue	37.87
Second street extended, NE	14.40
Euclid Place	140.69
Third street extended, NE	82.69
Irving street	151.12
Fourth street extended, NE	83.81
Connecticut avenue extended	37.13
Howardtown roads	1.87
R street extended, NE	107.29
First street extended, NW	5 00
Total central section	27,573.59
WESTERN SECTION.	
Brookville	$813.26
Broad Branch	2,741.41
Canal	252.77
Chain Bridge	149.45

Name of road.	Expended.
WESTERN SECTION—continued.	
Chappell	$594.98
Daniels	169.68
Foxhall	403.18
Grant	679.37
Klingle	7.75
Loughborough	662.90
Military	187.00
Milk-House Ford	108.23
Murdock Mill	48.25
New Cut	359.79
Pierce Mill	138.15
Ridge	340.17
Tennallytown	610.90
Tunlaw	67.24
Woodley Lane	1,485.88
Miscellaneous labor	1,099.62
Materal for general use	101.16
Blacksmithing	142.86
Total western section	11,164.00
RECAPITULATION.	
Eastern section	6,235.99
Central section	27,573.59
Western section	11,164.00
Unpaid bills	22.71
Total	44,996.29
Amount of appropriation	45,000.00
Expended	44,996.29
Balance	3.71

Expenditures from appropriation constructing county roads, etc., 1889.

Thirteenth street extended:	
Amount of appropriation	$1,000.00
Expended	994.98
Balance	5.02
Howard avenue:	
Amount of appropriation	7,700.00
Expended	7,620.87
Balance	79.13
Fourth street extended, northeast:	
Amount of appropriation	7,500.00
Expended	7,499.99
Balance	.01
Michigan avenue and First street:	
Amount of appropriation	7,500.00
Expended	7,482.23
Balance	17.77
Harrison street and Good Hope road:	
Amount of appropriation	13,140.00
Expended	12,692.65
Balance	447.35
Washington, Jackson, and Jefferson streets:	
Amount of appropriation	4,000.00
Expended	3,823.97
Balance	176.03
* Nichols avenue:	
Amount of appropriation	13,140.00
Expended	12,721.35
Balance	418.65

* NOTE.—The work on these streets was not done under my supervision, but they are included in order to show full amount expended from this particular fund.

*Fourteenth, Chapin, Pomeroy, and Stoughton streets:	
Amount of appropriation	$35,000.00
Expended	35,000.00

RECAPITULATION.

Amount of appropriation	88,980.00
Expended	87,836.04
Balance	1,143.96

Constructing and repairing bridges, fiscal year 1888–'89.

Bridges.	Appropriation.	Emergency fund.	Total.
EASTERN SECTION.			
Sheridan avenue	$36.37		$36.37
Anacostia road	4.50		4.50
Bennings	49.00	12.75	61.75
Monroe street	3.50		3.50
Morris road	9.13	8.50	17.63
Livingston road	207.25		207.25
Walker road	4.25		4.25
Wheeler road	338.55	272.50	611.05
T street	9.75		9.75
Fort Stanton road	10.12		10.12
Giesboro road		18.25	18.25
Hamilton road		22.00	22.00
Jackson street		12.25	12.25
Taylor street		15.25	15.25
Miscellaneous labor		18.46	18.46
Total eastern section	672.42	379.96	1,052.38
CENTRAL SECTION.			
Fourteenth street road	273.17		273.17
Spring street	6.12	33.75	39.87
Shepherd road	66.16		66.16
Queen Chapel road	87.47		87.48
Sargent road	12.25		12.25
Brentwood road	150.05		150.05
Lincoln avenue	37.62		37.62
Rock Creek, Ford road	6.75		6.75
Brightwood avenue	3.00		3.00
Fourth street extended, northeast (culverts)	1,076.20		1,076.20
Central avenue	244.58	104.64	349.27
Pierce Mill Bridge	201.23	218.25	419.48
Bunker Hill road	64.72	54.75	119.47
Rock Creek Church road	3.29		3.29
R street (culverts)	830.47		830.47
S street (culverts)	830.47		830.47
Riggs road	67.10	17.50	84.60
First street (culberts)	61.50		61.50
Linnaen Hill road	91.82		91.82
Bennings Bridge	42.00		42.00
Sixteenth street extended (culvert)	22.25		22.25
Woodley Lane Bridge	5.19		5.19
Klingle Ford road	63.24	48.00	111.24
Military road	232.67	67.68	300.35
Miscellaneous labor	188.57	12.60	201.17
Material, general use	27.70		27.70
Total central section	4,695.60	557.22	5,252.82
WESTERN SECTION.			
Chain Bridge	3,105.37	1,838.26	4,943.63
Daniels' road	195.98	15.75	211.73
Murdock Mill road	298.62		298.62
Tenallytown road	55.69		55.69
Broad Branch road	3.50		3.50
Chappel road	111.29	24.87	136.16
River road	474.35		474.35
Red lane	4.25		4.25
New Cut road (culvert)	17.00		17.00
Grant road	332.26	46.55	378.81
Miscellaneous labor		50.62	50.62
Material, general use	56.60		56.60
	10.00		10.00
Total western section	4,664.91	1,976.05	6,640.96

*NOTE.—The work on these streets was not done under my supervision, but they are included in order to show full amount expended from this particular fund.

Expenditures from appropriation ordinary care of bridges, 1889.

Salary of keeper Chain Bridge	$660.00
Repairing keeper's house	47.83
Outstanding bills	.24
Total	708.07

RECAPITULATION.

Appropriation construction and repair of bridges, 1889:	
Actually expended	10,032.93
Outstanding bills	155.31
	10,188.24
Appropriation ordinary care of bridges, 1889	708.07
Appropriation emergency fund, 1889	2,913.23
Total	13,809.54

Expenditures from appropriation sprinkling, sweeping, and cleaning streets, etc., 1889.

Sprinkling Brightwood avenue and Fourteenth street road	$636.11

Expended from appropriation current repairs streets, avenues, and alleys, 1889.

Back street (Georgetown)	$370.27

Summary of expenditures during year.

Current repairs, county roads, etc., 1889	$44,996.29
Constructing county roads, etc., 1889	87,836.04
Construction and repair of bridges, 1889	10,188.24
Ordinary care of bridges, 1889	708.07
Emergency fund, 1889	2,913.23
Sprinkling, sweeping, and cleaning streets, etc., 1889	636.11
Current repairs, streets, avenues, etc., 1889	370.22
Total	147,648.25

By reference to the tables herewith it will be seen that the principal items of expense under the head of "current repairs of county roads" in eastern section are the Anacostia road, which was resurfaced with gravel over a large portion of its length and put in a general good condition; the Bennings road, which was also graveled; Nichols avenue (that portion not under contract), the principal work repair of macadam and resurfacing certain portions with gravel. On the other roads in this section the repairs were of such a nature as occasion demanded from time to time.

In the central section the work on Columbia road included grading, setting curb, widening, macadamizing, laying sidewalks, etc. On Woodley Lane road the work done was principally grading and macadamizing from Columbia road to Woodley Bridge; on Brightwood avenue, graveling from Rock Creek Church road to Brightwood, and general repairs were made. Rock Creek Church road was widened and graded from Brightwood avenue to the eagle gate of Soldiers' Home, and was graveled the greater part of its remaining length. Park street, from Fourteenth to Seventeenth street, a portion or Whitney avenue, Eighth and Ninth streets between Boundary street and Grant avenue, Nineteenth street from Boundary to Columbia road, were macadamized. On Fourteenth street road, Lincoln avenue, Riggs, Shepherd, Blair roads, the principal expenditures were for graveling. All other expenditures in this section were such as are required from day to day in keeping the roads generally in repair.

In the western section, the Broad Branch road was widened and repaired with broken stone for the distance of about a mile; Woodley Lane was also widened, macadamized, and paved gutters laid from Tennallytown road to a point near west line of Mr. Gardiner Hubbard's place; portions of Loughborough, New Cut, Grant, and Foxhall roads were macadamized; Brookville, Chapel, and Tennallytown roads graveled. The remaining roads were given general repairs.

Under the head of "constructing country roads" Thirteenth street from Clifton street to Whitney avenue was graded; Howard avenue from Fourteenth to Seventeenth streets was macadamized, sidewalks and gutters laid; Fourth street was graded; Michigan avenue and First street also graded; Harrison street was macadamized from Nichols avenue to top of Good Hope hill and sidewalks laid on lower portion; Washington, Jackson, and Jefferson streets were graded.

On bridges large expenditures were necessitated on account of the damage done by the unusual high water in the early part of June, by which a number were com-

pletely destroyed and others damaged to such an extent that the cost of repairs was very large. In the eastern section, the bridge over Oxen Run on Wheeler road, together with one abutment, was carried away; none of the timbers and very few of the stone were recovered, which necessitated the hauling of stone from the city to rebuild it, as there was none obtainable in the vicinity. The bridge on Livingston road over Oxen Run also had to be rebuilt, with the exception of the abutments, which required considerable repair.

Bridge over Rock Creek, on Military road, was destroyed and abutments considerably damaged. The bridge at Pierce's Mill, over Rock Creek, was damaged to such an extent that the middle pier had to be torn down and rebuilt. Bridge over Broad Branch, at intersection of Broad Branch and Argyle Mill roads, was lifted from abutments, but was carried but a short distance, and cost of replacing it was comparatively small. On the New Cut road a new four-foot stone culvert was built, the old one being swept out by the freshet. The cost of repairs on Chain Bridge during the year was very heavy. In the early part the bridge was thoroughly overhauled, 900 new joists put in, and an entirely new floor (principally oak, though a small portion was Georgia pine) laid. During the freshet the span nearest the Virginia shore was struck by a drifting boat and very seriously damaged, the cost of repairing which was very large. In addition to this span, the upper work was all gone over, and all bolts, rods, etc., tightened. It was also found necessary to point up several of the piers as the joints were in very bad condition. There still remains one bridge which was destroyed, but which has never been rebuilt, owing to lack of funds, namely, that at Argyle Mill, over Rock Creek. The road, however, is not impassable, as there is a ford close at hand which can be used. A new bridge was built on Chapel road to replace an old and practically useless culvert. The cost of culverts on Central avenue was considerably increased owing to difficulty in getting a good foundation, the ground at this place being very soft. Large culverts were built on Fourth, R, and S streets to allow the grading of these new streets.

REPORT OF THE PARKING COMMISSION.

WASHINGTON, D. C.

SIR: The Parking Commission has the honor to submit the following, its nineteenth annual report of operations during the fiscal year ending June 30, 1889.

Removing guard-boxes from trees is steadily performed. It is a work of no small magnitude, but of vast improvement to the city. Where it is found necessary, these boxes will be replaced by wire screens, but it is not at present proposed to place the wire netting except where it seems essential. There are many streets and portions of streets where people are careful that horses are not permitted to nibble and injure the trees; in such localities the wire protection is not needed, and the trees are better without it. But there are many places where wire must still be used, and these will receive attention as soon as the material is available.

The Parking Commission is greatly impeded in the proper performance of the work which is considered essential to the maintenance of the trees, for want of sufficient appropriation.

There are many thousands of the older trees which have outgrown the spaces originally prepared for them, and are now suffering for want of needed attention.

Where the original soil is altogether unfit to sustain growth, the holes require extension and supplied with proper soil. Much good has resulted from the mere enlargement of the unpaved space around the stem. Where this has been done the effects of increased vigor are strongly marked in the result of stronger shoots and more deeply colored foliage.

As the trees increase in size they require a proportionate increase of water, and in most parts of the city this supply is controlled by the amount of clear surface around the base of the tree. Hence the necessity of having this space as extensive as convenience in other respects will permit.

There are yet remaining many trees in the parkings which should be removed. On all except a few of the widest streets and avenues one row of trees at the curb is all sufficient for shade. It is one of the peculiarly happy arrangements in the system of improvements in this city that the streets were so wide, or rather that the building lines on opposite sides were so far apart that the curb line, with its row of trees is removed from 15 feet to 40 feet from the building line, which insures shady promenades and yet admits sunlight to the parkings, thus allowing the successful growth of grass and flowering shrubs without enveloping dwellings in so dense a shade as to prevent thorough ventilation. It would be a good rule to establish that no trees be allowed in parkings less than 40 feet in width.

In the earlier stages of improvements it was quite excusable for citizens to protest

against the removal of trees, which, on account of the narrowing of the streets were left in the parkings, the young trees set out on the curb lines gave but little promise as substitutes for their older neighbors; but that time has passed and all inside trees should be discarded for sanitary reasons, if for nothing else.

It has now become quite evident that if the trees in this city are to be maintained in their beauty and usefulness, in a degree at all commensurate with their value to the city, the appropriation for the expenses of the parking commission must be materially increased.

No change has been made in the amount annually allotted for this purpose for fifteen years. During this time the city has constantly been extending, and the number of trees set out yearly has averaged over 3,000. As the trees attain large dimensions the labor of attention and care increases in proportion; the necessary pruning, keeping sidewalks and streets clear from the intervention of branches, occupies much time and consequent expenses, to the exclusion of other important matters.

It is important both for the health of the trees and the cleanly appearance of the city that no grass or weeds shall be allowed to gain a footing around the trees; this is an eye-sore which the means at command prevents removal.

The cultivation of the trees is deficient; thousands of them require immediate attention in this respect, which they can not receive. These evils are annually increasing, and if not counteracted will soon visibly impair one of the greatest characteristics of the city, its unequaled arboreal wealth.

We, therefore, respectfully suggest that an addition of $10,000 be made to the usual appropriation, so that the work of the Parking Commission may be more effectually performed.

The accompanying report of Mr. T. Lanham, Superintendent of Parking, presents the special details of operations, and we have the honor to again recommend that Mr. Lanham's salary be increased by $200 dollars per annum; his devotion to his arduous duties merits this recognition.

Very respectfully,

WM. R. SMITH,
JOHN SAUL,
WILLIAM SAUNDERS.

The ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA.

WASHINGTON, D. C.

TO THE PARKING COMMISSION, DISTRICT OF COLUMBIA:

GENTLEMEN: I have the honor to submit the following statement of the work performed during the fiscal year ending June 30, 1889:

In addition to the usual routine work of caring for trees and parkings, 334 old, decayed, and dangerous trees have been removed.

The Sycamore trees on Seventh, Tenth, and one square on Third street, East Washington, also those on M street, southwest, between South Capitol and Four-and-a-half streets, were closely pruned and have made a fine growth of young wood.

The luxuriant growth of the trees during the year made it necessary to do much pruning to relieve the sidewalks, and, as directed by you, particular attention has been given to the relief of the street lamps from the dense shade about them.

The roots of the large trees on many of the streets have so disturbed the pavements that two of the most careful men have been employed the entire year, weather and condition of ground permitting, in pruning roots and relaying the brick.

All excavations for young trees have been properly paved around; the bricks taken from the excavations, numbering 35,148, were hauled in the yard corner Third and B streets, southwest, and delivered to the Engineer Department, D. C., on the orders of the proper officers, and receipts taken therefor as delivered.

No coal was purchased, old wood from trees and tree boxes being used instead.

Seven thousand three hundred and two old wooden boxes were removed from the streets, hauled to the nursery, assorted and piled; the sound material therefrom was used in making 4,000 boxes, 2,300 of which were made large to replace small boxes which the trees had outgrown, and 1,700 were made small and used on the young trees set out during the year; 18,000 chestnut stakes were purchased and used; 1,000 rods of woven wire were purchased and used in protecting 5,249 trees from injury by horses, etc.; 5,178 trees without boxes and 3,456 trees with boxes were given a coat of lime wash; this was put on soft maples chiefly, which were affected by scale; 2,600 pounds of leather straps were purchased and used. In some localities it is impossible to keep straps on the young trees, as they are continually being cut off, presumably by boys for whips.

Storms were of frequent occurrence during April, May, and a portion of June, and much time was spent on repairs to damages caused by same.

Caterpillars were not numerous and but little time was consumed in their removal from the trees.

Thirteen hundred and twenty-three tree holes were made, the earth removed and holes filled with good soil. I have endeavored to carry out your special instructions in connection with this branch of the work, and I think no holes have been slighted as to size and quality of the soil placed therein. This part of the work is expensive, as in many cases both the dirt removed and the soil used have to be carted long distances.

Thirteen hundred and twenty-three young trees were planted. Four hundred and eighteen young and thrifty trees were replanted to take the place of that number of inferior trees.

Four hundred and twenty young trees were planted at Brookland: you furnishing 345 of this number and doing the planting, the proprietors bearing all other expenses connected therewith.

Owing to the fact that some streets placed under contract for improvements were not finished until too late this spring for tree planting, they yet remain without trees, but a memorandum has been made and they will be given attention as soon as the work of making excavations for young trees is begun.

Report of year ending June 30, 1888, shows number of trees on streets to be		64,920
Number trees planted and replanted during year ending June 30, 1889		2,161
Total		67,081
Number old trees removed	334	
Number trees lost by storm	26	
Number trees removed from Thirteenth street extended by change grade and not replanted	20	
Number trees removed by contractors from streets in West Washington on account change grade	98	
Number trees replanted which took the place of that number inferior trees already counted, but included in the number of trees (2,161) planted during year	418	
		896
Trees on streets July 1, 1889		66,185
Amount of appropriation		$18,000.00
Amount expended for labor	$14,530.18	
Amount expended for material	3,465.79	
		17,995.97
Amount of appropriation not expended		4.03

Very respectfully,

TRUEMAN LANHAM,
Superintendent for Parking Commission.

REPORT OF THE PROPERTY CLERK.

OFFICE OF PROPERTY CLERK, DISTRICT OF COLUMBIA,
Washington, D. C., October 28, 1889.

SIR: I have the honor to transmit herewith the report of the property clerk for the fiscal year ending June 30, 1889.

Very respectfully,

F. O. BECKETT,
Property Clerk.

Maj. CHARLES W. RAYMOND, U. S. ARMY,
Engineer Commissioner District of Columbia.

CLASS 1.—*Stationery.*

Total amount purchased as per invoices and vouchers	$8,939.71
Issued as follows to—	
Executive department	695.14
Engineer department	1,060.12
Water department	554.38
Police department	722.52
Fire department	84.09
Health department	471.50
Public schools	3,024.50
Police court	151.25
Inspector of buildings	112.01
Register of wills (record books, etc.)	298.62
Washington asylum	94.82
Attorney's office	98.74
Collector's office	474.57
Auditor's office	142.26
Assessor's office	683.73
Inspector of gas and meters	36.10
Parking commission	15.40
Coroner	10.88
Telegraph and telephone service	47.18
Markets	1.15
Harbor-master	1.80
Miscellaneous expenses District of Columbia	158.95
Total	8,939.71

CLASS 2.—*Blank forms and printing.*

Total amount purchased as per invoices and vouchers	5,963.07
Issued as follows to—	
Executive department	359.87
Engineer department	443.69
Water department	497.52
Fire department	93.59
Health department	293.88
Police department	278.86
Assessor's office	285.78
Auditor's office	56.18
Attorney's office	94.25
Collector's office	640.64
Public schools	1,043.88
Police court	65.73
Inspector of buildings	502.11
Washington Asylum	3.15
Telegraph and telephone service	25.40
General advertising	350.02
Judicial expenses	487.66
Relief of the poor	33.35
Miscellaneous expenses District of Columbia	407.51
Total	5,963.07

CLASS 3.—*School books.*

Total amount purchased as per invoices and vouchers	4,187.09
Issued as follows to—	
Public schools	4,170.32
Fire department	.50
Washington Asylum	11.27
Miscellaneous expenses District of Columbia	5.00
Total	4,187.09

CLASS 4.—*Furniture.*

Total amount purchased as per invoices and vouchers	$16,462.92
Issued as follows to—	
Public schools (new furniture, etc.)	10,791.80
Police department	2,438.00
Fire department	1,861.57
Inspector of cement casks, etc.	175.50
Collector's office	321.57
Health office	155.19
Executive department	119.88
Assessor's office	148.85
Washington Asylum	86.72
Attorney's office	71.99
Police court	60.06
Telegraph and telephone service	29.69
Harbor master	19.57
District building	74.64
Auditor's office	9.17
Engineer department	42.09
Water department	34.94
Parking commissioner	3.45
Miscellaneous expenses District of Columbia	18.24
Total	16,462.92

CLASS 5.—*Hardware.*

Total amount purchased as per invoices and vouchers	8,262.46
Issued as follows to—	
Executive department	3.13
Engineer department	1,982.40
Water department	517.27
Telegraph and telephone service	125.77
Sanitary inspector	7.98
Maintenance of order	31.09
Purchase and repair of pumps	7.68
Public schools	2,689.92
Fire department	506.19
Markets	56.87
Police court	9.14
Washington Asylum	717.64
Police department	142.82
Health department	241.33
Parking commission	479.22
Inspector of buildings	521.88
Transportation of prisoners	10.84
Harbor-master	10.96
Emergency	18.66
Assessor's office	75.87
Sprinkling, sweeping, and cleaning streets	78.44
Miscellaneous expenses District of Columbia	27.35
Total	8,262.46

CLASS 6.—*Tinware.*

Total amount purchased as per invoices and vouchers	6,528.07
Issued as follows to—	
Engineer department (street lamps, etc.)	3,182.38
Water department (lanterns, etc.)	116.20
Fire department (stoves and repairs)	191.20
Police department (stoves and repairs)	246.04

CLASS 6.—*Tinware*—Continued.

Health department (repairs to stoves)	$19.08
Washington Asylum	466.97
Public schools (stoves and repairs)	2,111.45
Telegraph and telephone service (stoves and repairs)	35.70
Police court (stoves and repairs)	79.90
Markets (stoves and repairs)	15.33
District office	14.15
Coroner (stove, etc.)	15.85
Harbor-master (stove, etc.)	14.05
Parking commission	1.77
Attorney's office (stove, etc.)	16.00
Miscellaneous expenses District of Columbia	2.00
Total	6,528.07

CLASS 7.—*Plumbing material.*

Total amount purchased as per invoices and vouchers	13,226.12
Issued as follows to—	
Water department (cast-iron pipe, etc.)	12,122.36
Engineer department	35.47
Police department	69.09
Fire department	382.75
Health department	4.95
Purchase and repair of pumps	58.08
Public schools	170.56
Washington Asylum	214.38
Inspector of buildings	35.90
Police court	6.85
Markets	3.50
Telegraph and telephone service	8.02
Harbor-master	9.52
Public stable	5.00
Inspector of cement	87.50
Miscellaneous expenses District of Columbia	12.19
Total	13,226.12

CLASS 8.—*Groceries.*

Total amount purchased as per invoices and vouchers	17,161.43
Issued as follows to—	
Executive department (soap)	2.00
Engineer department (oil, etc.)	87.02
Water department (oil, etc.)	49.59
Fire department (oil, soap, etc.)	154.59
Police department (oil, soap, etc.)	102.70
Health department (oil, soap, etc.)	12.53
Washington Asylum	15,874.42
Public schools (soap, oil, etc.)	788.84
Parking commission	1.80
Harbor-master	9.22
Telegraph and telephone service	.54
Collector's office (soap)	1.90
Police court (soap, lye, etc)	30.29
Transportation of prisoners (soap, etc.)	3.00
Emergency fund	.85
Coroner	1.42
Miscellaneous expenses District of Columbia	40.72
Total	17,161.43

CLASS 9.—*Boots and shoes.*

Total amount purchased as per invoices and vouchers	1,632.57
Issued as follows to—	
Washington Asylum	1,437.02
Engineer department	195.55
Total	1,632.57

CLASS 10.—*Drugs.*

Total amount purchased as per invoices and vouchers	2,013.69

CLASS 10—*Drugs*—Continued.

Issued as follows to—	
Washington asylum	$785.10
Health office	243.46
Inspector of cement	471.18
Police department	134.90
Fire department	165.08
Engineer department	64.09
Public schools	78.95
Telegraph and telephone service	41.15
Transportation of prisoners	8.76
Water department	1.25
Executive department	.80
Parking commission	.45
Miscellaneous expenses District of Columbia	18.52
Total	2,013.69

CLASS 11.—*Glass, paint, and varnish.*

Total amount purchased as per invoices and vouchers	1,744.82
Issued as follows to—	
Inspector of buildings	637.75
Washington Asylum	248.24
Water department	424.52
Public schools	190.30
Engineer department	88.63
Fire department	63.54
Harbor-master	42.75
Police department	39.40
Health department	4.22
Markets	3.87
Telegraph and telephone service	.13
Police court	.40
Parking commissioner	.70
Miscellaneous expenses District of Columbia	.37
Total	1,744.82

CLASS 12.—*Lumber.*

Total amount purchased as per invoices and vouchers	8,971.62
Issued as follows to—	
Engineer department	4,602.52
Public schools	1,556.23
Inspector of buildings	1,475.44
Parking commission (tree stakes, etc.)	814.62
Washington Asylum	237.93
Water department	170.67
Maintenance of public order	42.83
Fire department	26.29
Purchase and repair of pumps	24.30
Emergency fund	20.79
Total	8,971.62

CLASS 13.—*Forage.*

Total amount purchased as per invoices and vouchers	10,831.89
Issued as follows to—	
Executive department	18.31
Engineer department	649.29
Water department	403.00
Fire department	4,448.82
Police department	1,414.39
Washington Asylum	2,474.01
Parking commission	120.78
Telegraph and telephone service	218.23
Health department	493.75
Transportation of prisoners	242.34
Sprinkling, sweeping, and cleaning streets	28.37
Purchase and repair of pumps	8.97
Miscellaneous expenses District of Columbia	310.63
Total	10,831.89

CLASS 14.—*Fresh meat and corned beef.*

Total amount purchased as per invoices and vouchers	$5,613.89
Issued as follows to—	
Washington Asylum	5,613.89
Total	5,613.89

CLASS 15.—*Bacon and ham.*

Total amount purchased as per invoices and vouchers	1,012.44
Issued as follows to—	
Washington Asylum	1,012.44
Total	1,012.44

CLASS 16.—*Lamp-posts and miscellaneous castings.*

Total amount purchased as per invoices and vouchers	13,555.76
Issued as follows to—	
Water department	6,998.09
Engineer department	6,390.16
Inspector of buildings	123.57
Washington Asylum	43.94
Total	13,555.76

CLASS 17.—*Fuel.*

Total amount purchased as per invoices and vouchers	36,982.67
Issued as follows to—	
Public schools	23,871.95
Water department	5,084.21
Washington Asylum	2,706.20
Fire department	2,003.73
Police department	1,620.29
Engineer department	404.54
Miscellaneous expenses District of Columbia	439.50
Police court	246.92
Harbor-master	200.33
Health office	145.73
Markets	72.63
Telegraph and telephone service	113.77
Attorney's office	67.08
Transportation of prisoners	5.79
Total	36,982.67

CLASS 18.—*Dry goods.*

Total amount purchased as per invoices and vouchers	3,822.14
Issued as follows to—	
Washington Asylum	2,443.38
Public schools	683.86
Police department	451.97
Fire department	214.34
Executive department	10.05
Engineer department	.95
Health department	5.42
Auditor's office	2.00
Police court	1.90
Telegraph and telephone service	4.47
Miscellaneous expenses District of Columbia	3.80
Total	3,822.14

CLASS 19.—*Ice.*

Total amount purchased as per invoices and vouchers	1,241.45
Issued as follows to—	
Washington Asylum	369.24
Police department	233.47
Miscellaneous expenses District of Columbia	306.17

CLASS 19—*Ice*—Continued.

Fire department	$130.54
Police court	51.02
Health department	26.10
Public schools	51.84
Telegraph and telephone service	24.50
Engineer department	12.67
Attorney's office	15.55
Coroner	10.75
Harbor-master	6.00
Parking commission	3.00
Total	1,241.45

CLASS 20.—*Telegraph and telephone supplies.*

Total amount purchased as per invoices and vouchers	1,571.86
Issued as follows to—	
Telegraph and telephone service	1,437.42
Public schools	124.44
Health office	6.00
Engineer department	2.00
Executive department	2.00
Total	1,571.86

CLASS 21.—*Construction material.*

Value of material on hand July 1, 1888	27,566.84
Amount purchased to June 30, 1889	233,136.68
	260,703.52
Amount of material issued to June 30, 1889	217,203.34
Amount of material on hand June 30, 1889	43,500.18
Total	260,703.52

CLASS 22.—*Miscellaneous expenses, repairs, and supplies.*

EXECUTIVE DEPARTMENT.

Carriage	600.00
Repairs to vehicles	305.25
Rent of property yard	300.00
Car-tickets	209.50
Book-binding	146.25
One bicycle	130.00
Livery	125.00
Horseshoeing	67.25
Saddlery and repairs	99.75
Repairs to furniture	41.75
Rubber stamps and pads	18.25
Flags and awnings	13.00
Repairs to type-writers	29.50
Newspapers	3.14
Miscellaneous items	11.28
Pneumatic bells	46.00
Total	2,145.92

ENGINEER DEPARTMENT.

Horses	1,075.00
New harness and repairs	410.35
Livery	564.50
Tools and repairs	361.15
Repairs to vehicles	371.10
One road-scraper	260.13
Current meter	223.29
New vehicles	585.00
Horseshoeing	123.69
Field instruments and repairs	422.84
Repairs to furniture	103.95
Repairs to lanterns	141.90
Repairs to police boat	72.50
One stop-watch	50.00
Book-binding	68.00
Tester and meter seals	64.05
Repairs to type-writers	72.20
Repairs to bicycles and tricycles	20.00
Rubber stamps and pads	16.20
One yawl boat	25.50
Melting-kettle	36.00

CLASS 22.—*Miscellaneous supplies, etc.*—Cont'd.

ENGINEER DEPARTMENT—continued.

Mounting maps	$18.50
Medicine for horses	17.80
Papers and magazines	83.65
Photograph materials	16.20
Miscellaneous items	37.06
Total	5,237.11

WATER DEPARTMENT.

Repairs to boiler and house at the Georgetown pumping station	7,303.00
Hauling	1,688.92
Tin roof on the U street pump-house	499.00
Horses	965.00
Tools and castings	444.00
Pumps and repairs	640.43
Repairs to vehicles	271.75
Storage	228.00
Livery	270.00
Saddlery and repairs	188.05
Melting furnace	105.27
Car-tickets	80.00
Subscription to papers	11.20
Rubber stamps and pads	18.35
Horseshoeing	19.88
Awnings	34.00
Pine plugs	69.50
Repairs to electrical apparatus	33.09
Piling pipe	145.03
Scales	50.00
Miscellaneous items	28.83
Total	13,093.30

POLICE DEPARTMENT.

Pistols, batons, belts, and police-calls	1,556.90
Meals for prisoners	1,238.66
Horses	635.00
Rent of headquarters and substation, Anacostia	1,200.00
Harness and repairs	391.40
Laundry	305.49
One new patrol-wagon	325.00
Photographs for the Rogue's Gallery	164.60
Repairs to furniture	155.75
Badges, wreaths, and repairs to same	209.25
Horseshoeing	257.00
Renovating mattresses	90.00
Gas fixtures	168.98
Engraving pistols and numbering badges	89.00
Telegraph and telephone calls out of city	79.61
Repairs to vehicles	494.50
Putting down and cleaning carpets	44.62
Car-tickets	47.00
Medicine-case	30.00
Electrical gong and bell	26.50
Medicine for horses	19.00
Toilet-brushes and combs	19.18
Awnings	44.50
Rubber stamps and pads	10.00
Insect destroyers	80.09
Cartridges	24.00
Repairs to type-writers	22.00
Moving safe	15.00
Rent of boat during flood of June	15.00
Clocks and repairs to same	52.50
Hauling	23.99
Repairs to revolvers	24.75
Pasturing horses	21.60
Miscellaneous items	29.80
Total	7,910.67

FIRE DEPARTMENT.

One engine	4,500.00
Horses	3,947.50
Hose and couplings	4,499.90
New harness and repairs to same	1,503.71
Repairs to apparatus	2,302.22
Horseshoeing	1,019.99

CLASS 22.—*Miscellaneous supplies, etc.*—Cont'd.

FIRE DEPARTMENT—continued.

One hose-carriage	$695.00
Laundry	327.62
Fire-extinguishers and charges for the same	278.40
One set wheels for engine	198.69
Repairs to vehicles	155.30
Electric trip and repairs to engine-house No. 8	124.50
Renovating mattresses	84.00
Medicine for horses	61.43
Pasturing horses	71.91
Repairs to clocks	44.00
Gasfixiurts	32.60
Electric sheaes	35.00
Lining stalls with tin	29.00
Hauling	33.95
Putting down carpets and cleaning same	17.55
Oat cleaners	15.00
Traveling expenses	14.10
Subscription to periodicals	10.50
Record books	8.00
Car tickets	5.00
Repairs to furniture	9.65
Oil tester	7.70
Total	20,032.22

ASSESSOR'S OFFICE.

Book-binding	239.15
Papering room	55.85
Repairs to vehicle	35.00
Vehicle badges	46.40
Repairs to furniture	11.00
Mounting maps	15.00
Horseshoeing	11.25
Gas fixtures	11.50
Saddlery	6.00
Rubber stamps and pads	3.75
Tin signs	3.00
Miscellaneous items	3.00
Total	440.90

CORONER'S OFFICE.

Repairs to furniture	6.50

MARKETS.

Gas fixtures	1.25
Repairs to stall	4.00
Disinfectant	13.00
Total	18.25

HEALTH DEPARTMENT.

Repairs to vehicles	370.00
Bicycles and repairs to same	309.00
Horse	250.00
Harness and repairs to same	239.55
Tools and repairs to same	136.10
Horseshoeing	155.02
Book-binding and mounting maps	45.45
Cartridges	30.00
Subscription to papers and periodicals	22.28
Repairs to furniture	19.00
Food for dogs at pound	19.35
One pump	13.00
Self-lighting lamps	7.20
Putting in windows at pound	7.50
Rubber stamps and pads	3.25
Disinfectant	2.50
Miscellaneous items	20.60
Total	1,649.80

PUBLIC SCHOOLS.

Industrial instruction (cooking, groceries, tools, etc.)	3,481.58
Moving, repairing, and resetting furniture	1,502.11

CLASS 22.—*Miscellaneous supplies, etc.*—Cont'd.

PUBLIC SCHOOLS—continued.

Hauling	$829.30
Laboratory supplies	478.97
Diplomas	437.00
Repairs to clocks	261.75
Cleaning outhouses	194.25
Rent of theater for commencement white schools	125.00
Rent of African Methodist Episcopal Church for commencement colored schools	65.00
Gas fixtures	199.36
Type-writer and cabinet	110.00
Disinfectant	104.00
Book-binding	102.05
Molding-clay	98.00
Cleaning carpets	96.62
Sharpening tools	48.00
Thermometers	57.50
Plaster casts	37.50
Manikins	45.00
Rent of pianos and repairs to same	64.00
Washing towels	27.20
Shelving	23.00
Advertising	18.00
Rubber stamps and pads	4.50
Miscellaneous items	12.75
Total	8,422.44

TELEGRAPH AND TELEPHONE SERVICE.

Telegraph and telephone service for third precinct	3,500.00
Rent of telephone	3,362.09
Electric gong	151.25
Wire cable	102.30
Repairs to patrol boxes, etc	98.45
Condensers	61.00
Putting sash and glass in church tower	27.00
Whisperphones	24.00
Cable boxing	15.00
Repairs to chimneys	14.00
Repairs to harness	11.50
Miscellaneous items	13.25
Total	7,379.84

PARKING COMMISSION.

Whitewashing trees and boxes	347.24
Wire netting	1,200.00
Hauling soil	216.90
Repairs to vehicles	78.00
Hose and spraying machine	37.10
Sharpening tools	33.70
Horseshoeing	26.25
Harness and repairs to same	20.00
Miscellaneous items	.60
Total	1,959.79

AUDITOR'S OFFICE.

Book-binding	36.75
Repairs to furniture	45.25
Car tickets	7.50
Rubber stamps and pads	4.18
Total	93.68

WASHINGTON ASYLUM.

Gas fixtures	226.45
Seed and fruit trees	165.21
Household utensils	150.46
Underwear	138.00
Repairs to furniture	56.28
Harness and repairs to same	55.50
Repairs to microscope	16.20
Toilet brushes and combs	17.20
Repairs to pump	10.00
Repairs to sewing-machine	7.46
Meat block	4.00
Subscription to periodicals	2.00
Insect destroyer	3.50
Miscellaneous items	12.57
Total	864.83

CLASS 22.—*Miscellaneous supplies, etc.*—Cont'd.

POLICE COURT.

Awnings	$36.00
Repairs to furniture	28.50
Rubber stamps and pads	25.75
Hauling	11.55
Books and book-binding	15.00
Disinfectant	12.50
Miscellaneous items	1.80
Total	131.10

TRANSPORTATION OF PRISONERS.

Horses	425.00
Repairs to van	91.75
Horseshoeing	49.09
Saddlery and repairs	25.65
Repairs to stable	18.00
Medicine for horses	3.25
Total	612.65

INSPECTOR OF ASPHALT AND CEMENT.

Chemical apparatus	57.10
Laboratory supplies	266.18
Total	323.28

COLLECTOR'S OFFICE.

Dog-tags	149.53
Harness and repairs	52.10
One safe	950.00
One horse	250.00
Car tickets	38.75
Rubber stamps and pads	21.00
Wall-papering	79.45
Book-binding	17.25
Subscription to periodicals	6.00
Miscellaneous items	9.75
Total	1,573.83

INSPECTOR OF BUILDINGS.

Hitching apparatus	50.00
Mounting maps	35.90
Pumps and repairs to same	23.02
Car tickets	35.00
Miscellaneous items	7.64
Total	151.56

PURCHASE AND REPAIR OF PUMPS.

Pumps	231.96
Tools	8.40
Total	240.36

MAINTENANCE OF PUBLIC ORDER.

Rolling and hauling wire cable	10.00

HARBOR-MASTER.

Repairs to police boat	169.01
Towing police boat from Baltimore to Washington, D. C	55.26
1 yawl boat and cover for police boat	40.00
Brass signs	26.00
1 compass	15.00
Rubber stamp and pad	1.25
Total	306.52

CLASS 22.—*Miscellaneous supplies, etc.*—Cont'd.

ATTORNEY'S OFFICE.

Repairs to furniture	$14.50
Cleaning carpets	6.40
Repairs to clock	6.00
Book-binding	3.75
Total	30.65

REGISTER OF WILLS.

Book-binding	20.25
Cards for file-boxes	9.70
Total	29.95

MISCELLANEOUS EXPENSES.

Livery	640.00
Care of horses at District stables	480.00
Washing towels, District building	352.68
Repairs to vehicles	133.80
Book-binding	131.46
Saddlery and repairs to same	98.50

CLASS 22.—*Miscellaneous supplies, etc.*—Cont'd.

MISCELLANEOUS EXPENSES—continued.

Repairs to furniture, District building	$73.50
Horseshoeing	42.00
Hauling ashes, etc	42.55
Repairs to clocks, District building	46.62
Scales	248.00
Repairs to District stable	137.00
Window ventilators	40.00
Cleaning and putting down carpets	13.67
Decorations on District building on the 4th of March	22.35
Gas fixtures	11.50
Rubber stamps and pads	8.50
Medicine for horses	4.15
Papering room	9.80
Moving safe	4.00
Car tickets	5.00
Carbolic soap	6.00
Miscellaneous items	3.00
Total	2,554.08
Total for miscellaneous expenses	$75,219.18
Total for year ending June 30, 1889	478,081.53

REPORT OF THE BOARD OF EXAMINERS OF STEAM ENGINEERS.

WASHINGTON D. C., *July* 1, 1889.

SIRS: We have the honor to present to you the report of the Board of Examiners of Steam Engineers for the year ending June 30, 1889. The following table will show the work as it progressed during each month.

Months.	Meetings held.	Applications received.	Applications examined.	Applications approved.	Applications not competent.	United States license.	License not called for.
1888.							
July	22	100	100	92	8	.....	.....
August	23	110	110	101	9	.....	.....
September	21	32	32	29	3	.....	.....
October	14	33	33	31	2	.....	.....
November	9	14	14	11	3	.....	.....
December	8	11	11	10	1	.....	.....
1889.							
January	9	14	14	13	1	.....	.....
February	9	6	6	6	0	.....	.....
March	9	9	9	8	1	.....	.....
April	9	8	8	6	2	.....	.....
May	9	5	5	5	0	.....	.....
June	8	13	13	10	3	19	30
Total	80	355	355	322	33	19	30

Besides the work referred to above, the board have visited a large number of plants, and where defects have been found they were ordered repaired. We find the plants in much better order than they were two years ago, but we have met with one very serious obstacle, and that is, that other parties have visited different plants and reported that they were members of the Board of Steam Engineers, and in this way have caused much trouble with the engineers. We would suggest that each member of the board should be furnished with a badge or something by which they could be recognized.

On the 30th of April the board met with the loss of one of its members, Mr. John Riley, by death, and if in the future there should be any appropriation made to reimburse the members of the board for the services they have rendered in the past, we sincerely hope that his wife, Mrs. John Riley, will not be forgotten.

On May 4, Mr. Harry Boesch was appointed as a member of the board to fill the vacancy caused by the death of Mr. Riley, and we have found him to be a man of thorough judgment in the discharge of the duties of his office.

The board has now been in operation for the past twenty-six months, and have to the best of their ability performed its duties, without compensation. All of the tools required by the board have been furnished by its members, viz: one small engine, one injector, one inspirator, one check-valve, two globe-valves, one grate-bar, and various other small tools.

We hope that your honorable Board will not forget at the next session of Congress H. R. bill No. 9763, an act to amend an act to regulate steam-engineering in the District of Columbia, as the present law is very defective, and also ask that you would remember the board in your deficiency bill.

All of which is most respectfully submitted,

JOHN H. WILKERSON, *Chairman*,
A. A. DULY, *Secretary*,
H. BOESCH,
Board of Steam Engineers.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF THE BOILER-INSPECTOR.

WASHINGTON, D. C., *June* 29, 1889.

GENTLEMEN: I have the honor to make the following report of the number of steam-boilers inspected during fiscal year ending June 30, 1889:

Steam-boilers inspected	414
Steam-boilers condemned for repairs	14
Steam boilers condemned as unfit for use	4
New boilers erected	42
Explosions	0

BOILERS INSPECTED.

July 2.—No. 1. Vertical tubular boiler in slaughter-house, Ninth and C streets northeast, owned by John Howard. Hydrostatic pressure 110 pounds; working pressure allowed, 65 pounds to the square inch. Expires July 2, 1889.

July 2.—No. 2. Horizontal tubular boiler in guano factory, Geisboro' Point, owned by P. Mann. Hydrostatic pressure, 125 pounds; working pressure allowed, 75 pounds to the square inch. Expires July 2, 1889.

July 3.—No. 3. Vertical tubular boiler in steam carpet cleaning works, Fifteenth and K streets southeast, owned by F. H. Youngs. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to the square inch. Expires July 3, 1889.

July 4.—No. 4. Vertical tubular boiler in carriage factory, Pennsylvania avenue, between Third and Four-and-a-half streets northwest, owned by John McDermott & Bro. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to the square inch. Expires July 4, 1889.

July 6.—No. 5. Vertical tubular boiler in Metropolitan dye works, 224 Seventh street southeast, owned by W. F. Weinheimer. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires July 6, 1889.

July 7.—No. 6. Vertical tubular boiler, foot of Seventeenth street northwest, owned by J. B. Lord, used for hoisting purposes. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to the square inch. Expires July 7, 1889.

July 9.—No. 7. Horizontal tubular boiler in planing-mill, corner of Eighth and I streets northwest, owned by J. H. Lewis. Hydrostatic pressure, 125 pounds; working pressure allowed, 70 pounds to square inch. Expires July 9, 1889.

July 9.—No. 8. Horizontal tubular boiler in Arlington Hotel, T. E. Roesselle, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to the square inch. Expires July 9, 1889.

July 10.—No. 9. Vertical tubular boiler in dye works, 1336 Fourteenth street northwest, owned by R. C. Douglas. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to the square inch. Expires July 10, 1889.

July 11.—No. 10. Horizontal tubular boiler in planing-mill, corner Thirteenth and B streets northwest, owned by E. E. Jackson & Co. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires July 11, 1889.

July 11.—Nos. 11 and 12. Horizontal tubular boilers in planing-mill, corner Thirteenth and B streets northwest, owned by E. E. Jackson & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. No. 11 condemned for repairs; repaired and passed. Expires July 11, 1889.

July 14.—No. 13. New horizontal tubular boiler in Fendall building, corner Four-and-a-half and D streets northwest, owned by Reginald Fendall. Hydrostatic press-

ure, 140 pounds; working pressure allowed, 80 pounds to the square inch. Expires July 14, 1889.

July 16.—No. 14. Vertical tubular boiler in bottling works, West Washington, owned by Samuel C. Palmer. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 16, 1889.

July 16.—No. 15. Horizontal tubular boiler in Arlington Hotel, T. E. Roesselle, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires July 16, 1889.

July 17.—No. 16. Baxter boiler in ice-cream depot, 1425 New York avenue northwest, owned by J. Fussell. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 17, 1889.

July 18.—No. 17. Vertical tubular boiler in Quaker steam laundry, 921 E street northwest, owned by H. L. Dumble. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to the square inch. Expires July 18, 1889.

July 18.—No. 18. Vertical tubular boiler used for hoisting purposes, owned by A. M. Cowell. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to the square inch. Expires July 18, 1889.

July 19.—No. 19. Locomotive form boiler in Potomac Box Factory, 508 R street, northwest, owned by R. A. Daniell. Hydrostatic pressure 120 pounds; working pressure allowed, 70 pounds to square inch. Expires July 19, 1889.

July 19.—No. 20. Locomotive form boiler in depot corner New Jersey avenue and C street, northwest, owned by Baltimore and Ohio Railroad Company. Hydrostatic pressure 150 pounds; working pressure allowed, 110 pounds to square inch. Expires July 19, 1889.

July 20.—No. 21. Vertical tubular boiler in printing-office, Eleventh street between E and F streets, northwest, owned by William H. Moore. Hydrostatic pressure 90 pounds; working pressure allowed, 40 pounds to the square inch. Expires July 20, 1889.

July 20.—No. 22. New vertical tubular boiler in steam-bakery, 1254 Thirty-second street, northwest, owned by Edward Tholman. Hydrostatic pressure 150 pounds; working pressure allowed, 80 pounds to square inch. Expires July 20, 1889.

July 21.—No. 23. Vertical tubular boiler in steam-bakery, Thirteenth street, between C and D streets, northwest, owned by Charles E. Koller. Hydrostatic pressure 90 pounds; working pressure allowed, 40 pounds to square inch. Expires July 21, 1888.

July 21.—No. 24. Vertical tubular boiler in French steam-laundry, 810 Ninth street, northwest, owned by L. and Madame Daubrenet. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 21, 1889.

July 23.—No. 25. Horizontal tubular boiler in planing mill, Water street, northwest, owned by Wheatley Bros. Hydrostatic pressure 155 pounds; working pressure allowed, 90 pounds to square inch. Expires July 23, 1889.

July 24.—No. 26. Vertical tubular boiler in slaughter-house, Seventh street road, owned by Widmayer Bros. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 24, 1889.

July 24.—No. 27. Vertical tubular boiler in machine-shop, Thirty-second and Canal streets, northwest, owned by George E. Noyes. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 24, 1889.

July 25.—No. 28. Vertical tubular boiler in Arlington Bottling Works, Twenty-seventh and K streets, northwest. Hydrostatic pressure 120 pounds; working pressure allowed, 60 pounds to square inch. Expires July 25, 1889.

July 25.—No. 29. Horizontal tubular boiler in car-stables, northwest, owned by Washington and Georgetown Railroad Company. Hydrostatic pressure 127 pounds; working pressure allowed, 80 pounds to square inch. Expires July 25, 1889.

July 26.—No 30. Locomotive form boiler in brick-yard, South Capitol street, owned by James Richards. Hydrostatic pressure 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 26, 1889.

July 27.—No. 31. Horizontal tubular boiler (north boiler) in building corner of Thirteen-and-a-half and B streets, northwest, owned by United States Electric Lighting Company. Hydrostatic pressure 150 pounds; working pressure allowed, 90 pounds to square inch. Expires July 27, 1889.

July 27.—No. 32. Horizontal tubular boiler (center boiler) in building corner Thirteen and-a-half and B streets, northwest, owned by United States Electric Lighting Company; hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires July 27, 1889.

July 27.—No. 33. Horizontal tubular boiler (south boiler) in building Thirteen-and-a-half and B streets, northwest, owned by United States Electric Lighting Company. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires July 27, 1889.

July 30.—No. 34. Horizontal tubular boiler in printing-office, Eleventh street above Pennsylvania avenue northwest, owned by Judd & Detweiler. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires July 30, 1889.

July 30.—Nos. 35 and 36. Horizontal tubular boilers in Star office, Eleventh street and Pennsylvania avenue, northwest, owned by Evening Star Publishing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expires July 30, 1889.

July 30.—No. 37. Vertical tubular boiler in wood and coal yard, 2115 E street, northwest, owned by William Muirhead. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 30, 1889.

July 30.—No. 38. Locomotive form boiler in wood and coal yard, 519 Twenty-first street northwest, owned by George S. Fairfax. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 30, 1889.

July 31.—No. 39. Vertical tubular boiler in slaughter-house, Bladensburgh road, owned by Santus Auth. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 31, 1889.

July 31.—No. 40. Locomotive form in brick-yard, Twenty-first and A streets, southeast, owned by C. R. Monroe & Co. Hydrostatic pressure, 90 pounds; working pressure allowed, 40 pounds to square inch. Condemned for a new boiler. Expires November 30, 1888.

August 1.—Nos. 41 and 42. New horizontal tubular boilers in planing-mill, First and G streets, northeast, owned by Thomas W. Smith. Hydrostatic pressure, 150 pounds; working pressure allowed, 70 pounds; if necessary, 80 pounds to square inch. Expires August 1, 1889.

August 2.—No 43. Horizontal tubular boiler at head of Eighteenth street, northwest, owned by Beckwith, Quackenbush & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires August 2, 1889.

August 4.—No. 44. Locomotive form boiler in wood and coal yard, Sixth street and Virginia avenue southeast, J. E. Rose, agent. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires August 4, 1889.

August 4.—No. 45. Compound horizontal flue boiler at Tenth street wharf, owned by Great Falls Ice Company. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to square inch. Expires August 6, 1889.

August 4.—No. 46. Vertical tubular boiler in bottling works, First and Virginia avenue southwest, owned by Anheuser-Busch Brewing Association. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires August 8, 1889.

August 9.—No 47. Vertical tubular boiler at wharf, West Washington, owned by Independent Ice Company. Hydrostatic pressure 125 pounds; working pressure allowed, 70 pounds to the square inch. Expires August 9, 1889.

August 10.—No. 48. Vertical tubular boiler in John's restaurant, corner Seventh and D streets, northwest. C. H. Weser, proprietor. Hydrostatic pressure 120 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 10, 1889.

August 10.—No. 49. Vertical tubular boiler in machine-shop, 211 Twelfth street, northwest, owned by J. W. Sinclair. Hydrostetic pressure 75 pounds; working pressure allowed 50 pounds to the square inch. Expires August 10, 1889.

August 10.—Nos. 50 and 51. Horizontal tubular boilers in Saks's building, owned by Saks & Co. Hydrostatic pressure 129 pounds; working pressure allowed, 80 pounds each to the square inch. Expires August 10, 1889.

August 10.—No 52. Locomotive form boiler at wharf, West Washington, owned by Great Falls Ice Company. Hydrostatic pressure 100 pounds; working pressure allowed, 60 pounds to square inch. Expires August 10, 1889.

August 11.—No. 53. Vertical tubular boiler on steam-excavator, owned by Andrew Gleason, contractor. Hydrostatic pressure 150 pounds; working pressure allowed, 100 pounds to the square inch. Expires August 11, 1889.

August 14.—No. 54. Locomotive form boiler in brick-yard, South Capitol and P streets, north west, owned by S. Martin. Hydrostatic pressure 100 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 14, 1889.

August 14.—No. 55. Horizontal tubular boiler, head of Eighteenth street, northwest, owned by Beckwith, Quackenbush & Co. Hydrostatic pressure 120 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 14, 1889.

August 14.—No. 56. Horizontal tubular boiler in Riggs House, C. W. Spofford, proprietor. Hydrostatic pressure 120 pounds; working pressure allowed, 70 pounds to the square inch. Expires August 14, 1889.

August 16.—No. 57. Locomotive form boiler in brick-yard, N and South Capitol streets, owned by Winsor & Ford. Hydrostatic pressure 90 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 16, 1889.

August 16.—No. 58. Horizontal tubular boiler in National Homeopathic Hospital. Hydro-static pressure 100 pounds; working pressure allowed, 50 pounds to the square inch. Expires August 16, 1889.

August 16.—No. 59. Vertical tubular boiler in 220 Thirteen-and-a-half street, northwest, owned by W. B. Spoker. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to the square inch. Expires August 16, 1889.

August 17.—No. 60. New horizontal tubular boiler in building corner Fourteenth and H streets, northwest, owned by J. F. Cook. Hydrostatic pressure 155 pounds; working pressure allowed, 80 pounds to the square inch. Expires August 17, 1889.

August 17.—No. 61. Vertical tubular boiler in greenhouse, Bladensburgh road, owned by C. Strauss & Co. Hydrostatic pressure 140 pounds; working pressure allowed, 80 pounds to the square inch. Expires August 17, 1889.

August 20.—No. 62. Horizontal tubular boiler in Freedmen's Hospital. Hydrostatic pressure, 150 pounds; working pressure allowed, 50 pounds to square inch; if necessary, 70 pounds. Expires August 20, 1889.

August 21.—No. 63. Horizontal tubular boilers in Freedmen's Hospital. Hydrostatic pressure, 150 pounds; working pressure allowed, 50 pounds to square inch; if necessary, 70 pounds. Expires August 21, 1889.

August 25.—Nos. 64 and 65. New horizontal tubular boilers in 1218 and 1220 F street northwest, owned by W. H. Houghton & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 70 pounds; if necessary, 80 pounds each to square inch. Expires August 25, 1889.

August 27.—Nos. 66 and 67. Horizontal tubular boilers in Central building, corner Pennsylvania avenue and Ninth street northwest, owned by Gunton estate. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to the square inch. Expires August 27, 1889.

August 28.—No. 68. Horizontal tubular boiler in bottling works, Virginia avenue, between Sixth and Seventh streets southwest, owned by Samuel C. Palmer. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 28, 1889.

August 28.—Nos. 69 and 70. Horizontal tubular boilers in Ebbitt House, owned by C. C. Willard. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds each to square inch. Expires August 28, 1889.

August 28.—No. 71. Horizontal tubular boiler in Hooe Building. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to square inch. Owned by C. C. Willard. Expires August 28, 1889.

August 28.—No. 72. Vertical tubular boiler in Glenwood Cemetery, used for hoisting purposes. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 28, 1889.

August 29.—No. 73. Vertical tubular boiler in bottling works, Tenth and I streets southeast, owned by Fred. Hermann. Hydrostatic pressure, 85 pounds; working pressure allowed, 50 pounds to the square inch. Expires August 29, 1889.

August 30.—No. 74. Horizontal tubular boiler in brick-yard, Queenstown, D. C., owned by Potomac Terra Cotta Company. Hydrostatic pressure, 155 pounds; working pressure allowed, 100 pounds to the square inch. Expires August 30, 1889.

August 31.—No. 75. New vertical tubular boiler in greenhouse (Lincoln avenue, county), owned by George Field & Bro. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 31, 1889.

August 31.—No. 76. Vertical tubular boiler in pump-house at United States Soldiers' Home. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 31, 1889.

August 31.—No. 77. Vertical tubular boiler in pump-house at United States Soldiers' Home. Hydrostatic pressure, 115 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 31, 1889.

August 31.—No. 78. Vertical tubular boiler in fan-house at United States Soldiers' Home. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to the square inch. Expires August 31, 1889.

September 3.—No. 79. Horizontal tubular boiler in printing office, corner Pennsylvania avenue and Thirteenth street northwest, owned by Gibson Bros. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to the square inch. Expires September 3, 1889.

September 4.—No. 80. Vertical tubular boiler in University building, Glenwood road. Edward Brady, superintendent. Hydrostatic pressure, 129 pounds; working pressure allowed, 80 pounds to square inch. Condemned for repairs, four months allowed to do the work. Expires January 4, 1889.

September 5.—No. 81. Horizontal tubular boiler in brick-yark, M and South Capitol streets southeast, owned by Ford & Bro. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to the square inch. Expires September 5, 1889.

September 5.—No. 82. Horizontal tubular boiler in brick-yard, N and South Capitol streets southwest, owned by Winsor & Ford. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Condemned for a new boiler. Allowed to run three months. A new boiler has been put in place of this. Expires December 5, 1888.

September 5.—Nos. 83 and 84. Horizontal tubular boilers in the Portland, Fourteenth street and Vermont avenue northwest. Hydrostatic pressure, 110 pounds; working pressure allowed, 50 pounds each to square inch; if necessary, 60 pounds. Expires September 5, 1889.

September 5.—No. 85. New vertical tubular boiler in steam bakery 420 Four-and-a-half street southwest, owned by Charles Schafer. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires September 5, 1889.

September 6.—No. 86. Vertical tubular boiler in Acme Steam Laundry, F street northwest, owned by P. D. Welcker. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to the square inch. Expires September 6, 1889.

September 6.—No. 87. Horizontal tubular boiler in Hooe building, F street northwest, owned by C. C. Willard. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to square inch. Expires September 6, 1889.

September 7.—No. 88. Vertical tubular boiler in photo-lithographing establishment, 461 C street northwest, owned by Bell Bros. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to the square inch. Expires September 7, 1889.

September 7.—No. 89. Vertical tubular boiler in restaurant, 604 Pennsylvania avenue northwest, owned by P. Moore. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to the square inch. Expires September 7, 1889.

September 8.—No. 90. Horizontal tubular boiler in the Portland. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires September 8, 1889.

September 8.—No. 91. Vertical tubular boiler in printing office, 514 Eighth street northwest, owned by Byron S. Adams. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires September 8, 1889.

September 8.—No. 92. Vertical tubular boiler at Twelfth street wharf, owned by Johnson Bros. Hydrostatic pressure, 180 pounds; working pressure allowed, 115 pounds to the square inch. Expires September 8, 1889.

September 8.—No. 93. Horizontal tubular boiler in brass works, D street between Twelfth and Thirteenth streets northwest, owned by Robert Leitch & Sons. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires September 8, 1889.

September 10.—Nos. 94 and 95. New horizontal tubular boilers in Atlantic building, F street northwest. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds each to square inch. Expires September 10, 1889.

September 10.—No. 96. Horizontal tubular boiler in Second National Bank building, Seventh street northwest. Hydrostatic pressure, 95 pounds; working pressure allowed, 50 pounds to square inch; if necessary, 60 pounds. Expires September 10, 1889.

September 11.—No. 97. Vertical tubular boiler (high steam) in Howard University. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to the square inch. Expires September 11, 1889.

September 11.—Nos. 98 and 99. Horizontal tubular boilers (low steam) in Howard University, examined and tested by hammer test; working pressure allowed, 15 pounds; if necessary, 30 pounds each to square inch. Expires September 11, 1889.

September 12.—No. 100. Vertical tubular boiler in Columbia file works, C street, northwest, owned by Henry Rosendale. Hydrostatic pressure, 80 pounds; working pressure allowed, 40 pounds to square inch. Expires September 12, 1889.

September 14.—No. 101. Vertical tubular boiler in Connecticut pie bakery, 1407 Thirty-second street, West Washington, owned by H. Copperthite & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires September 14, 1889.

September 15.—No. 102. New horizontal tubular boiler in Kellogg building, owned by H. A. Willard. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires September 15, 1889.

September 17.—No. 103. Horizontal tubular boiler in terra-cotta works, owned by Potomac Terra Cotta Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires September 17, 1889.

September 17.—No. 104. Horizontal tubular boiler in terra cotta works owned by Potomac Terra Cotta Company. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds to square inch. Expires September 17, 1889.

September 20.—No. 105. New horizontal tubular boiler in Kellogg building, owned by H. A. Willard. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to the square inch. Expires September 20, 1889.

September 20.—No. 106. Horizontal tubular boiler in Carlisle building, northeast corner of Eleventh and F streets, northwest, (Boston dry goods house), Woodward & Lothrop, proprietors. Hydrostatic pressure, 110 pounds; working pressure allowed, 65 pounds to the square inch. Expires September 20, 1889.

September 21.—No. 107. Horizontal tubular boiler in Evans building, 1420 New York avenue northwest, owned by D. S. Evans, jr. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires September 21, 1889.

September 21.—No. 108. Horizontal tubular boiler in Riggs House, C. W. Spofford, proprietor. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires September 21, 1889.

September 22.—No. 109. Baxter boiler in photo-lithographing establishment, owned by Norris Peters. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to the square inch. Expires September 22, 1889.

September 22.—No. 110. Locomotive-form boiler in city post-office. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires September 22, 1889.

September 22.—No. 111. Horizontal tubular boiler in city post-office. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to the square inch. Expires September 22, 1889.

September 24.—No. 112. Locomotive-form boiler in brick-yard, Queenstown, D. C., owned by Potomac Terra Cotta Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Condemned for a new boiler. New boiler has been put up. Expires March 24, 1889.

September 24.—Nos. 113 and 114. New horizontal tubular boilers in Terra Cotta Works, owned by Thomas Somerville & Sons. Hydrostatic pressure, 180 pounds; working pressure allowed, 120 pounds each to square inch. Expires September 24, 1889.

September 25.—Nos. 115 and 116. Horizontal tubular boilers in Corcoran building, owned by estate of W. W. Corcoran. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires September 25, 1889.

September 26.—No. 117. Vertical tubular boiler in wood and coal yard, Thirtieth street and canal, owned by Mayfield & Heiston. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 26, 1889.

September 26.—No. 118. Vertical tubular boiler in steam-dredge, owned by Chesapeake and Ohio Canal Company. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires September 26, 1889.

September 26.—No. 119. Vertical tubular boiler in gas-works. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Owned by Georgetown Gas Company. Expires September 26, 1889.

September 26.—No. 120. Vertical tubular boiler, used for hoisting purposes, owned by Chesapeake and Ohio Canal Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 26, 1889.

September 28.—No. 121. Horizontal tubular boilers in Corcoran building, owned by estate of W. W. Corcoran. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires September 28, 1889.

September 28.—No. 122. Horizontal tubular boiler in Carlisle building, Eleventh and F streets, northwest (Boston dry goods house), Woodward & Lothrop, proprietors. Hydrostatic pressure, 115 pounds; working pressure allowed, 65 pounds to square inch. Expires September 28, 1889.

October 1.—No. 123. Locomotive form boiler at St. Joseph Church, Second and C streets, northeast, owned by J. Edwards, contractor. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires October 1, 1889.

October 1.—Nos. 124 and 125. Horizontal tubular boiler in Washington Ammonia Works, Twenty-seventh street, northwest. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds each to square inch. Expires October 1, 1889.

October 1.—No. 126. Horizontal (south boiler) tubular boiler in pump house, owned by Washington Gas-Light Company Pump Works, Twenty-sixth and G streets, northwest. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires October 1, 1889.

October 2.—No. 127. Horizontal tubular boiler in Wormley's Hotel, owned by James Wormley's sons. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 2, 1889.

October 2.—No. 128. Baxter boiler in cider factory, 611 Seventh street, northwest, owned by Samuel Loyd. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 2, 1889.

October 3.—No. 129. Vertical tubular in restaurant corner Seventh and G streets, northwest, owned by Schwing & Clark. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 3, 1889.

October 3.—No. 130. Horizontal tubular boiler in Hotel Solaris, owned by Edmond A. Solari. Hydrostatic pressure 100 pounds; working pressure allowed, 40 pounds to square inch. Expires October 3, 1889.

October 3.—Nos. 131 and 132. Horizontal tubular boiler in New National Theater, W. W. Rapley, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expires October 3, 1889.

October 4.—No. 133. Horizontal tubular boiler in United States jail. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires October 4, 1889.

October 4.—No. 134. Horizontal tubular boiler in United States jail. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires October 4, 1889.

October 4.—No. 135. Horizontal tubular boiler in Wormley's Hotel, owned by James Wormley's sons. Hydrostatic pressure, 115 pounds; working pressure allowed, 60 pounds to square inch. Expires October 4, 1889.

October 4.—No. 136. Horizontal tubular boiler in exhaust house, gas works, Twenty-sixth and G streets, northwest, owned by Washington Gas-Light Company. Hydrostatic pressure, 115 pounds; working pressure allowed, 60 pounds, if necessary 70 pounds, to square inch. Expires October 4, 1889.

October 5.—No. 137. Vertical tubular boiler in Harris House; J. H. Harris, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires October 5, 1889.

October 5.—Nos. 138 and 139. Vertical tubular boiler in Harris House; J. H. Harris, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expires October 5, 1889.

October 6.—No. 140. New vertical tubular boiler in Elite steam laundry, 208 and 210 B street, northwest, Fred. G. Rogers, proprietor. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires October 6, 1889.

October 6.—No. 141. Vertical tubular boiler, foot of Eleventh street, southwest, owned by J. E. Donaldson. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires October 6, 1889.

October 6.—No. 142. Horizontal tubular boiler in United States Coast and Geodetic Survey Office. Hydrostatic pressure, 85 pounds; working pressure allowed, 30 pounds to square inch. Expires October 6, 1889.

October 6.—No. 143. Horizontal tubular boiler in United States Coast and Geodetic Survey Office. Hydrostatic pressure, 80 pounds; working pressure allowed, 30 pounds to square inch. Expires October 6, 1889.

October 8.—Nos. 144 and 145. Horizontal tubular boilers in dry-goods house owned by Lansburgh & Bro. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds each to square inch. Expires October 8, 1889.

October 8.—Nos. 146 and 147. Horizontal tubular boilers in greenhouse owned by J. H. Small & Sons. Hydrostatic pressure, 70 pounds; working pressure allowed, 30 pounds each to square inch. Expires October 8, 1889.

October 8.—No. 148. Horizontal tubular boiler in Willard's Hotel; O. G. Staples, proprietor. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires October 8, 1889.

October 9.—Nos. 149 and 150. New horizontal tubular boilers in Hotel Johnson, corner Thirteenth and E streets, northwest; E. L. Johnson proprietor. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds, if necessary 70 pounds, each to square inch. Expires October 9, 1889.

October 10.—No. 151. Vertical tubular boiler in Harvey's restaurant, corner Eleventh and Pennsylvania avenue, northwest, owned by T. H. Harvey. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 10, 1889.

October 10.—No. 152. Vertical tubular boiler in Tremont House, corner Second and Indiana avenue, northwest; Sam Banks, proprietor. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires October 10, 1889.

October 10.—No. 153. Horizontal tubular boiler in steam marble-works, 407 Thirteen-and-one-half street, northwest, owned by J. F. Manning. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for a new boiler. New boiler has been put in. Expires January 10, 1889.

October 10.—No. 154. Vertical tubular boiler in greenhouse, Bennings road, owned by Charles. F. Hall. Hydrostatic pressure, 80 pounds; working pressure allowed, 40 pounds to square inch. Expires October 10, 1889.

October 11.—No. 155. Vertical tubular boiler in machine shop, Twelfth and B streets, northwest, owned by Shepherd & Hurley. Hydrostatic pressure, 160 pounds; working pressure allowed, 70 pounds to square inch. Expires October 11, 1889.

October 11.—No. 156. Locomotive form boiler in Metropolitan Hotel; W. H. Selden, proprietor. Tested by hammer test; working pressure allowed, 50 pounds to square inch. Expires October 11, 1889.

October 12.—No. 157. Vertical tubular boiler in wood and coal yard, corner Eighth and O streets, northwest, owned by C. H. Burgess. Hydrostatic pressure, 70 pounds; working pressure allowed, 40 pounds to square inch. Expires October 12, 1889.

October 12.—No. 158. Vertical tubular cast-iron boiler in bottling works owned by F. H. Finley. Hydrostatic pressure, 75 pounds; working pressure allowed, 30 pounds to square inch. Expires October 12, 1889.

October 13.—No. 159. Vertical tubular boiler in Willard's Hotel; O. G. Staples, proprietor. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires October 13, 1889.

October 13.—No. 160. Horizontal tubular boiler in Havenner's steam bakery; Charlton & Graves, proprietors. Hydrostatic pressure, 105 pounds; working pressure allowed, 65 pounds to square inch. Expires October 13, 1889.

October 15.—No. 161. Horizontal tubular boiler in iron works, Twelfth street and Ohio avenue, owned by C. A. Schneider's Sons. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires October 15, 1889.

October 15.—No. 162. New horizontal tubular boiler in planing mill, Twelfth and B streets, northwest, owned by J. B. Hammond. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to the square inch. Expires October 15, 1889.

October 15.—No. 163. New Babcock and Wilcox Company boiler, in U. S. Patent Office. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to the square inch. Expires October 15, 1889.

October 16.—No. 164. Vertical tubular boiler at Grant's Row, East Capitol street; B. H. Warner, receiver. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch (used for hoisting purposes). Expires October 16, 1889.

October 16.—Nos. 165 and 166. New horizontal tubular boilers in building, southwest corner Thirteenth street and Pennsylvania avenue, northwest, owned by Richmond and Danville Railroad Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, each to square inch. Expires October 16, 1889.

October 16.—No. 167. New Babcock and Wilcox Company boiler, in S. U. Patent Office. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to square inch. Expires October 16, 1889.

October 17.—No. 168. Horizontal tubular boiler in Post Building, Tenth and D streets, northwest, owned by Washington Post Publishing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires October 17, 1889.

October 17.—No. 169. Horizontal tubular boiler in Moses building, Eleventh and F streets, northwest, owned by W. B. Moses & Son. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to the square inch. Expires October 17, 1889.

October 17.—No. 170. Vertical tubular boiler in wood and coal yard, Sixth and K streets, northwest, owned by George W. Merrill. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to the square inch. Expires October 17, 1889.

October 17.—No. 171. Vertical tubular boiler in Chemical Works, Twenty-seventh street, northwest, owned by E. B. Warrend. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to the square inch. Condemened for repairs; repaired and passed. Expires October 17, 1889.

October 17.—No. 172. Horizontal tubular boiler in The Clarendon, Fourteenth street and New York avenue; Mrs. M. J. Colley, proprietress. Hydrostatic pressure, 125 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to the square inch. Expires October 17, 1889.

October 17.—No. 173. Vertical tubular boiler at gas holder, Twenty-second and K streets, northwest, owned by Washington Gas Light Company. Hydrostatic pressure, 190 pounds; working pressure allowed, 60 pounds to square inch. Expires October 17, 1889.

October 18.—No. 174. Horizontal tubular boiler in Post Building, Tenth and D streets, northwest, owned by Washington Post Publishing Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires October 18, 1889.

October 18.—No. 175. Horizontal tubular boiler in Metropolitan Hotel, W. H. Selden, proprietor. Hydrostatic pressure, 90 pounds; working pressure allowed, 40 pounds, if necessary 60 pounds, to square inch. Expires October 18, 1889.

October 18.—No. 176. Horizontal tubular boiler at gas holder, First and K streets, southwest, owned by Washington Gas Light Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 18, 1889.

October 19.—No. 177. Horizontal tubular boiler in National Hotel, W. H. Crosby, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires October 19, 1889.

October 20.—No. 178. Vertical tubular boiler in tannery, L street, between Seventh and Eighth southeast, owned by B. E. Baker. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 20, 1889.

October 22.—No. 179. Horizontal tubular boiler in brick-yard, owned by Washington Brick Machine Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Condemned for repairs; repaired and passed. Expires October 22, 1889.

October 22.—No. 180. Horizontal tubular boiler in brick-yard, owned by Washington Brick Machine Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires October 22, 1889.

October 22.—No. 181. Horizontal tubular boiler in pump-house at gas works, Twenty-sixth and G streets, northwest, owned by Washington Gas Light Company.

Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires October 22, 1889.

October 23.—No. 182. Locomotive-form boiler in wood and coal yard, Fourteenth and B streets, northwest, owned by George Bogus. Hydrostatic pressure, 80 pounds; working pressure allowed, 50 pounds to square inch. Expires October 23, 1889.

October 24.—No. 183. Vertical tubular boiler in printing office, 633 F street, northwest, owned by William G. White. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires October 24, 1889.

October 25.—No. 184. Vertical tubular boiler in slaughter-house, owned by F. P. Seibert. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires October 25, 1889.

October 25.—No. 185. Horizontal tubular boiler in The Hamilton House, Fourteenth and K streets, northwest; William M. Gilsen, proprietor. Hydrostatic pressure 115 pounds; working pressure allowed, 70 pounds to square inch. Expires October 25, 1889.

October 25.—No. 186. Horizontal tubular boiler, in south wing United States jail. Hydostatic pressure, 70 pounds; working pressure allowed, 40 pounds to square inch. Expires October 25, 1889.

October 25.—No. 187. Horizontal tubular boiler in south wing United States jail. Hydrostatic pressure, 80 pounds; working pressure allowed, 40 pounds to square inch. Expires October 25, 1889.

October 25.—No. 188. Vertical tubular boiler in laundry at United States jail. Hydrostatic pressure, 140 pounds; working pressure allowed, 60 pounds to square inch. Expires October 25, 1889.

October 26.—No. 189. Horizontal tubular boiler in Moses building, Eleventh and F streets, northwest, owned by W. B. Moses & Son. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires October 26, 1889.

October 27.—No. 190. New vertical tubular boiler in Masonic Hall, owned by Masonic Hall Association; Noble D. Larner, secretary. Hydrostatic pressure, 155 pounds; working pressure allowed, 80 pounds to square inch. Expires October 27, 1889.

October 30.—Nos. 191 A, 192 B, 193 C, 194 D. Horizontal tubular boilers in building, Thirteen-and-a-half and B streets, northwest, owned by United States Electric Lighting Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds each to square inch. Expires October 30, 1889.

October 31.—No. 195. Vertical tubular boiler in wood and coal yard, 464 E street, southwest, owned by R. J. Collins. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires October 31, 1889.

November 1.—No. 196. Vertical tubular boiler in Palace Steam Laundry, 113 Four-and-a-half street, southwest, owned by W. F. Barker and E. Shepardson. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 1, 1889.

November 1.—No. 197. Horizontal tubular boiler in building, Thirteen-and-a-half and B streets, northwest, owned by United States Electric Lighting Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires November 1, 1889.

November 2.—No. 198. Horizontal tubular boiler in the Hamilton House, Fourteenth and K streets, northwest; William M. Gilsen, proprietor. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires November 2, 1889.

November 5.—No. 199. Vertical tubular boiler in mattress factory, owned by H. A. Linger. Hydrostatic pressure, 155 pounds; working pressure allowed, 100 pounds to square inch. Expires November 5, 1889.

November 5.—No. 200. Horizontal tubular boiler in brewery owned by C. Heurich. Hydrostatic pressure, 130 pounds; working pressure allowed, 75 pounds to square inch. Condemned for repairs, work to be done in three months. Expires February 5, 1889.

November 6.—No. 201. Vertical tubular boiler on scow *Potomac*, owned by Lyman A. Littlefield. Hydrostatic pressure, 155 pounds; working pressure allowed, 100 pounds to square inch. Expires November 6, 1889.

November 7.—No. 202.—Vertical tubular boiler in wood and coal yard, D street and Delaware avenue, northeast, owned by Elia Chelini. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 7, 1889.

November 8.—No. 203. Vertical tubular boiler in Welcker's hotel and restaurant, Fifteenth street, northwest; Ch. Felter, proprietor. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires November 8, 1889.

November 8.—No. 204. Horizontal tubular boiler in The Woodmont, Thirteenth street and Iowa circle; R. Portner owner, Theod. Fribus proprietor. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires November 8, 1889.

November 9.—No. 205, Vertical tubular boiler in hair factory, Anacostia, D. C., owned by H. A. Linger. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires November 9, 1889.

November 9.—No. 206. Vertical tubular boiler in The Woodmont, Thirteenth street and Iwoa circle; Theodore Fribus, proprietor. Hydrostatic pressure, 90 pounds; working pressure allowed, 40 pounds, if necessary 60 pounds, per square inch. Expires November 9, 1889.

November 12.—No. 207. Horizontal tubular boiler in mill corner North Capitol street and Massachusetts avenue, northeast, owned by McDowell & Sons. Hydrostatic pressure. 120 pounds; working pressure allowed, 70 pounds to square inch. Expires November 12, 1889.

November 14.—No. 208. New vertical boiler at gas-works, foot of Twelfth street, southeast, owned by Washington Gas-Light Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires November 14, 1889.

November 14.—No. 209. New vertical boiler at gas-works, foot of Twelfth street, southeast, owned by Washington Gas-Light Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires November 14, 1889.

November 17.—No. 210. Vertical tubular boiler in slaughter-house, Bladensburg road, owned by J. J. West. Hydrostratic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 17, 1889.

November 17.—No. 211. Vertical tubular boiler in slaughter-house Bladensburg road, owned by M. Auth. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires November 17, 1889.

November 17.—No. 212. New vertical tubular boiler in slaughter-house, Bladensburg road, owned by Anton Ruppert. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires November 17, 1889.

November 19.—No. 213. Vertical tubular boiler in printing office. Hydrostatic pressure 90 pounds; working pressure allowed, 50 pounds to square inch. Owned by Gray & Clarkson. Expires November 19, 1889.

November 22.—No. 214. Horizontal flue tubular boiler at Stephenson's wharf, owned by Stephenson & Bro. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires November 22, 1889.

November 22.—No. 215. Vertical tubular boiler in steam coffee-mill, Maryland avenue and C street southwest, owned by W. J. Lown. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 22, 1889.

November 27.—No. 216. Vertical tubular boiler in bakery, Eighteenth street and Pennsylvania avenue northwest, owned by G. S. Krafft, used for heating purposes. Hydrostatic pressure, 35 pounds; working pressure allowed, 15 pounds to square inch. Expires November 27, 1889.

November 27.—No. 217. Vertical tubular boiler in 324 B street southwest, owned by Kingsley Bros. Hydrostatic pressure, 125 pounds; working pressure allowed, 70 pounds, if necessary 80 pounds, to the square inch. Expires November 27, 1889.

November 29.—No. 218. Horizontal tubular boiler in Sun building, A. S. Abell, agent. Hydrostatic pressure, 105 pounds; working pressure allowed, 80 pounds to square inch. Expires November 29, 1889.

November 29.—No. 219. Horizontal tubular boiler in Sun building. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 29, 1889.

November 29.—No. 220. Horizontal tubular boiler in National Hotel, W. H. Crosby, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires November 29, 1889.

November 30.—No. 221. Vertical tubular boiler in oyster depot, 3004 M street, West Washington, owned by C. R. Fields. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires November 30, 1889.

November 30.—No. 222. Horizontal tubular boiler in restaurant and oyster saloon, 3002 M street northwest, owned by James F. Simmons. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires November 30, 1889.

December 4.—No. 223. Vertical tubular boiler in building corner K street and New Jersey avenue southeast, owned by Baltimore United Oil Company (P. S. Foster, agent). Hydrostatic pressure, 100 pounds; working pressure allowed, 40 pounds, if necessary 60 pounds, to square inch. Expires December 4, 1889.

December 5.—No. 224. Vertical tubular boiler in bottling works, Four-and-a-half and M streets southwest, owned by M. T. Bridwell. Hydrostatic pressure, 100 pounds; working pressure allowed, 40 pounds, if necessary 60 pounds, to square inch. Expires December 5, 1889.

December 5.—No. 225. Vertical tubular boiler in Kernan's Washington Theatre,

Eleventh and C streets northwest, James L. Kernan, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 5, 1889.

December 6.—No. 226. Vertical tubular boiler in printing office, 1319 F street northwest, owned by Brown & McElfresh. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires December 6, 1889.

December 6.—No. 227. New vertical tubular boiler in building at Washington Monument, used for heating purposes, Johnson & Morris, builders; Thomas Egan, manager. Hydrostatic pressure, 50 pounds; working pressure allowed, 30 pounds to square inch. Expires December 6, 1889.

December 7.—No. 228. Vertical tubular boiler in printing office, Ninth and E streets northwest, owned by Joseph L. Pearson. Hydrostatic pressure, 80 pounds; working pressure allowed, 40 pounds to square inch. Expires December 7, 1889.

December 7.—No. 229. Locomotive-form boiler in The Arno, Sixteenth street northwest, Wm. E. Prail, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 7, 1889.

December 10.—No. 230. Vertical tubular boiler in 614, Eleventh street southwest, owned by Columbia Machine Company, P. Maltby, superintendent. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. Expires December 10, 1889.

December 10.—No. 231. Vertical tubular boiler in steam coffee-mill, in rear of H street, between Four-and-a-half and Sixth streets southwest, owned by H. C. Browning. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds; if necessary 80 pounds, to square inch. Expires December 10, 1889.

December 10.—No. 232. Vertical tubular boiler, sold by John Sinclair to Brinkley and Orsbern. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Condemned for repairs; repaired and passed. Expires December 10, 1889.

December 12.—No. 233. Vertical tubular boiler in Sunday Herald office, Tenth street, between D and E streets northwest, C. Kalbfus, manager. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires December 12, 1889.

December 13.—No. 234. Vertical tubular boiler in steam coffee-mill, N street and New Jersey avenue northwest, owned by J. A. Sweeny. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires December 13, 1889.

December 13.—No. 235. Compound horizontal tubular boiler in wood and coal-yard, First and L streets northeast, owned by Arthur B. Smith. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed. Expires December 13, 1889.

December 15.—No. 236. Horizontal tubular boiler in planing-mill, owned by Jas. L. Cox & Co., corner D and North Capitol streets northwest. Hydrostatic pressure, 130 pounds; working pressure allowed, 70 pounds to square inch. Expires December 15, 1889.

December 15.—No. 237. Locomotive-form boiler in Morgan Steam Laundry, 517 Ninth street northwest, owned by John Morgan. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires December 15, 1889.

December 19.—No. 238. Vertical tubular boiler in printing office, 417 Eleventh street northwest, owned by Simms & Grimsley. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires December 19, 1889.

December 21.—No. 239. Horizontal tubular boiler in machine-shop and foundry, Sixth and O streets southwest, owned by Charles White & Co. Hydrostatic pressure, 125 pounds; working pressure allowed. 70 pounds to square inch. Expires December 21, 1889.

December 26.—No. 240. New vertical tubular boiler in Maltby House, corner New Jersey avenue and B street northwest, D. Doolittle, proprietor. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. Expires December 26, 1889.

December 29.—No. 241. Vertical tubular boiler in slaughter-house, Bladensburg road, owned by J. A. Augusteffer. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 29, 1889.

January 1.—No. 242 and 243. Horizontal tubular boilers in mill, First street and Maryland avenue northwest, owned by William M. Galt & Co. Hydrostatic pressure, 130 pounds; working pressure allowed, 85 pounds each to square inch. Expires January 1, 1890.

January 1.—No. 244. New horizontal tubular boiler in brick-yard, Queenstown, D. C., owned by Potomac Terra Cotta Company. Hydrostatic pressure, 170 pounds; working pressure allowed, 110 pounds to square inch. Condemned for repairs; repaired and passed January 29. Expires January 1, 1890.

January 3.—No. 245. New horizontal tubular boiler in The Normandie. H. M.

Cake, proprieter. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires January 3, 1890.

January 4.—No. 246. New horizontal tubular boiler in The Normandie, Fifteenth and I streets northwest, H. M. Cake, proprietor. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires January 4, 1890.

January 14.—No. 247. Re-tested locomotive-form boiler at St. Joseph's Church, second and C street northeast, owned by J. Edwards, contractor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires January 14, 1890.

January 14.—No. 248. New vertical tubular boiler, furnished by Forsberg, Murray & Co., in Miller school building, 623 H street, northwest, owned by District of Columbia. Hydrostatic pressure, 160 pounds; working pressure allowed, 80 pounds to square inch. Expires January 14, 1890.

January 19.—No. 249. Vertical tubular boiler in Eagle Iron Works, Fourteenth and B streets northwest, owned by Petitt & Dripps. Hydrostatic pressure, 125 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires January 19, 1890.

January 21.—No. 250. Vertical tubular boiler in Washington Brass Works, 1212 D street northwest, owned by William H. Douglas. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires January 21, 1890.

January 21.—No. 251. Vertical tubular boiler in Central Iron Works, 1212 D street northwest, owned by J. B. Daughton. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires January 21, 1890.

January 21.—No. 252. Horizontal tubular boiler in South Washington Iron Works, owned by John Springman. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires January 21, 1890.

January 23.—No. 253. Vertical tubular boiler in wood and coal yard, 3004 Water street, West Washington, owned by C. C. Walker & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires January 23, 1890.

January 26.—No. 254. Horizontal tubular boiler in brass works, Thirteenth street northwest, owned by Thomas Somerville & Sons. Hydrostatic pressure, 110 pounds; working pressure allowed, 65 pounds to square inch. Expires January 26, 1890.

January 28.—Nos. 255 and 256. Horizontal tubular boiler in Center Market, owned by Washington Market Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch each. Expires January 28, 1890.

January 31.—No. 257. Horizontal tubular boiler in Center Market, owned by Washington Market Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. Expires January 31, 1890.

February 1.—No. 258. New horizontal tubular boiler in steam marble works, 407 Thirteen-and-a-half street northwest, owned by J. F. Manning. Hydrostatic pressure, 160 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. This boiler is in place of old boiler No. 153. Expires February 1, 1890.

February 9.—No. 259. Vertical tubular boiler in Congressional Hotel, corner B treet and New Jersey avenue southeast, Henry Brock, proprietor. Hydrostatic, spressure, 100 pounds; working pressure allowed, 40 pounds; if necessary 60 pounds to square inch. Expires February 9, 1890.

February 11.—No. 260. Horizontal tubular boiler in file-holder works, Massachusetts avenue, between Sixth and Seventh streets northwest, owned by E. W. Woodruff. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires February 11, 1890.

February 12.—No. 261. Vertical tubular boiler in printing office, 1108 E street, northwest, owned by McQueen & Wallace. Hydrostatic pressure, 120 pounds; working pressure allowed, 50 pounds, if necessary 80 pounds, to square inch. Expires February 12, 1890.

February 13.—No. 262. New vertical tubular boiler in rear of 611 M street northwest, owned by the Reynolds Electrical Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires February 13, 1890.

February 14.—No. 263. Vertical tubular boiler on steam-roller Percy, owned by the Cranford Paving Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires February 14, 1890.

February 14.—No. 264. Horizontal tubular boiler in the Randall House, Fifteenth street and Pennsylvania avenue (owned by Randall estate, Webb & Elliott, trustees). Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds, if necessary 70 pounds, to square inch. Expires February 14, 1890.

February 18.—No. 265. Horizontal tubular boiler in Washington Iron Foundry, 468 to 474 Maine avenue southwest, owned by George White & Sons. Hydrostatic

pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires February 18, 1890.

February 18.—No. 266. Horizontal flue-boiler in planing-mill, Missouri avenue, between Four-and-a-half and Sixth streets northwest, owned by George T. Dearing. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires February 18, 1890.

February 23.—No. 267. Vertical tubular boiler in slaughter-house, One-half street southwest, owned by Fred. Dietz. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 23, 1890.

February 25.—No. 268. New horizontal tubular boiler in brewery, Twentieth street northwest, owned by C. Heurich. Hydrostatic pressure, 170 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. Expires February 25, 1890.

February 26.—No. 269. Horizontal tubular boiler in brewery, Fourth and E streets northeast, owned by Albert Carry. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires February 26, 1890.

February 27.—No. 270. New Babcock and Wilcox Company boiler at station Fourth and U streets, northeast, owned by Eckington and Soldiers' Home Railway Company. Hydrostatic pressure, 190 pounds; working pressure allowed, 110 pounds, if necessary 125 pounds, to square inch. Expires February 27, 1890.

February 28.—No. 271. Horizontal tubular boiler in brewery, Fourth and E streets northeast, owned by Albert Carry. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires February 28, 1890.

February 28.—No. 272. Horizontal tubular boiler in Washington Brewery, E street, between Thirteenth and Fourteenth streets southeast, owned by Henry Rabe. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires February 28, 1890.

March 2.—No. 273. Horizontal tubular boiler in Washington Brewery, owned by Henry Rabe. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires March 2, 1890.

March 5.—No. 274. Vertical tubular boiler in wood and coal yard, South Capitol and I streets southeast, owned by John Miller. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires March 5, 1890.

March 9.—No. 275.—New horizontal tubular boiler in Government Printing Office. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to square inch. Expires March 9, 1890.

March 11.—No. 276. Locomotive-form boiler in printing office, 1308 Pennsylvania avenue northwest, owned by R. H. Darby. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires March 11, 1890.

March 12.—No. 277. Horizontal flue-boiler in brick-yard, O and South Capitol streets southeast, owned by A. Richards & Co. Hydrostatic pressure, 95 pounds; working pressure allowed, 50 pounds to square inch. Expires March 12, 1890.

March 12.—No. 278. Horizontal flue-boiler in brick-yard, owned by A. Richards & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires March 12, 1890.

March 12.—No. 279. Locomotive-form boiler in yard at Littlefield's wharf, used for stone-crusher, owned by the Cranford Paving Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to the square inch. Expires March 12, 1890.

March 12.—No. 280. Vertical tubular boiler in yard at Littlefield's wharf, used for hoisting purposes, owned by the Cranford Paving Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires March 12, 1890.

March 14.—No. 281. New vertical tubular boiler in Fleming building, 1419 G street northwest, owned by Robert I. Fleming. Hydrostatic pressure, 140 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires March 14, 1890.

March 18.—Nos. 282 and 283. Horizontal tubular boilers in brick-yard owned by I. Childs & Co. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds each to square inch. Expires March 18, 1890.

March 21. No. 284. Horizontal tubular boiler at coal-wharf, Thirtieth street northwest, owned by Gilmor Meredith & Co. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires March 21, 1890.

March 21.—No. 285. Locomotive-form boiler in building 631 to 635 Massachusetts avenue, northwest, owned by Stumph & Bro. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires March 21, 1890.

March 22.—Nos. 286 and 287. Cylinder-boilers at coal wharf, West Washington, owned by John P. Agnew & Co. Hydrostatic pressure, 145 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, each to square inch. Expires March 22, 1890.

March 23.—No. 288. Vertical tubular boiler in West End Steam Laundry, Pennsylvania avenue, between Seventeenth and Eighteenth streets northwest, owned by Henry Wagner. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds, if necessary 80 pounds, to square inch. Expires March 23, 1890.

March 25.—No. 289. New vertical tubular boiler, foot of Pennsylvania avenue southeast, owned by Groton Bridge and Manufacturing Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to the square inch. Expires March 25, 1890.

March 28.—No. 290. Vertical tubular boiler in printing office, D street northwest, owned by R. O. Polkinhorn. Hydrostatic pressure, 80 pounds; working pressure allowed, 40 pounds, if necessary 50 pounds, to square inch. Condemned for repairs; repaired and passed. Expires March 28, 1890.

March 30.—No. 291. Vertical tubular boiler in wood and coal yard, Water street, West Washington, owned by A. G. Johnson. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires March 30, 1890.

March 30.—No. 292. Vertical tubular boiler on steam-roller Dexter, owned by the Cranford Paving Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires March 30, 1890.

March 30.—No. 293. Vertical tubular boiler in Buckeye Steam Laundry, 618 Ninth street northwest, owned by Conrad & Bozzell. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires March 30, 1890.

April 1.—Nos. 294 and 295. Horizontal tubular boilers in Glover building (Thomas J. Fisher & Co., agents). Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds each to square inch. Expires April 1, 1890.

April 1.—No. 296. Horizontal tubular boiler in Lamond's Terra Cotta Works, owned by A. Lamond. Hydrostatic pressure, 180 pounds; working pressure allowed, 120 pounds to square inch. Expires April 1, 1890.

April 1.—No. 297. Vertical tubular boiler in printing office, 625 Louisiana avenue northwest, owned by Thomas J. Brashears. Hydrostatic pressure, 75 pounds; working pressure allowed, 40 pounds to square inch. Expires April 1, 1890.

April 2.—No. 298. Vertical tubular boiler in yard Twenty-eighth and K streets northwest, owned by the Barber Paving Company (A. L. Barber & Co.), used for hoisting purposes. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires April 2, 1890.

April 2.—No. 299.—Locomotive-form boiler in yard Twenty-eighth and K streets northwest, owned by the Barber Paving Company (A. L. Barber & Co.). Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires April 2, 1890.

April 2.—No. 300. Horizontal tubular boiler in yard Twenty-eighth and K streets northwest, owned by the Barber Paving Company (A. L. Barber & Co.). Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires April 2, 1890.

April 3.—No. 301. Vertical tubular boiler at Littlefield's wharf, used for hoisting purposes, owned by Littlefield & Alvord. Hydrostatic pressure, 150 pounds, working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. Expires April 3, 1890.

April 3.—No. 302. Vertical tubular boiler at Church of the Covenant, Eighteenth and N streets northwest, used for hoisting purposes, owned by W. C. Morrison, contractor. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires April 3, 1890.

April 3.—No. 303. Vertical tubular boiler in 315 Twenty-second street northwest, owned by H. H. Russell. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. Expires April 3, 1890.

April 4.—No. 304. New vertical tubular boiler, used for hoisting purposes, at Fourth and U streets northeast, "Eckington," owned by George Truesdell. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds, if necessary 100 pounds, to square inch. Expires April 4, 1890.

April 4.—No. 305. New horizontal tubular boiler at Eckington Station, Fourth and U streets northeast, owned by Eckington and Soldiers' Home Railway Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires April 4, 1890.

April 5.—No. 306. Horizontal tubular boiler in yard at Littlefield's wharf, owned by the Cranford Paving Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires April 5, 1890.

April 5.—No. 307. Vertical tubular boiler on scow *Chesapeake*. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Owned by Littlefield & Alvord. Expires April 5, 1890.

April 8.—No. 308. Horizontal tubular boiler in planing-mill, foot of Fourth street southeast, owned by T. B. Cross, jr. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires April 8, 1890.

April 11.—Nos. 309 and 310. New horizontal tubular boilers in brewery, Fourth and E streets northeast, owned by Albert Carry ' Hydrostatic pressure, 155 pounds; working pressure allowed, 90 pounds each to square inch. Expires April 11, 1890.

April 12.—No. 311. Vertical tubular boiler, foot of Pennsylvania avenue southeast, owned by Groton Bridge and Manufacturing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 75 pounds to square inch. Expires April 12, 1890.

April 12.—No. 312. Vertical tubular boiler on scow *Potomac*, owned by Littlefield & Alvord. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires April 12, 1890.

April 13.—No. 313. Vertical tubular boiler at United States Library site. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 100 pounds, to square inch. Condemned for repairs; repaired and passed. Expires April 13, 1890.

April 13.—No. 314. Vertical tubular boiler in Yale Steam Laundry, owned by P. H. Walker & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. 522 Tenth street northwest. Expires April 13, 1890.

April 15.—No. 315. Vertical tubular boiler in slaughter-house, Seventh Street road, owned by Jacob Franz. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires April 15, 1890.

April 16.—No. 316. Vertical tubular boiler in slaughter-house, Seventh Street road, owned by A. Loeffler. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 16, 1890.

April 16.—No. 317. Vertical tubular boiler in Union Market, Pennsylvania avenue, between Third and Four-and-a-half streets northwest, owned by J. J. Appich. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to the square inch. Expires April 16, 1890.

April 17.—No. 318. Horizontal tubular boiler in the Nation's Monumental Works, 129 to 133 Pennsylvania avenue northwest, owned by D. McMenamin. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires April 17, 1890.

April 18.—No. 319. New locomotive-form boiler in oleomargarine factory, N street and Delaware avenue southwest, owned by William Schallenberger. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires April 18, 1890.

April 18.—No. 320. New horizontal tubular boiler in brick-yard owned by Washington Brick Machine Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires April 18, 1890.

April 20.—No. 321.—Vertical tubular boiler, used for driving wells, owned by H. Holmes. Hydrostatic pressure, 160 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires April 20, 1890.

April 20.—No. 322. Horizontal tubular boiler in the Randall House, Webb & Elliott, trustees. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds, if necessary 70 pounds, to square inch. Expires April 20, 1890.

April 22.—No. 323 Vertical tubular boiler in laundry works, 1216 and 1218 H street northeast, owned by Portland Steam Laundry. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires April 22, 1890.

April 22.—No. 324. Vertical tubular boiler in laundry works, 1216 and 1218 H street northeast. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds if necessary 90 pounds, to square inch. Condemned for repairs; repaired and passed. Expires April 22, 1890.

April 22.—No. 325. Vertical tubular boiler in wood and coal yard, foot of Twenty-sixth street, owned by William E. Hodge. Hydrostatic pressure, 130 pounds; working pressure allowed, 70 pounds to square inch. Expires April 22, 1890.

April 23.—No 326. Horizontal tubular boiler in printing office, E street between Eleventh and Twelfth streets northwest, owned by Thos. McGill & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires April 23, 1890.

April 24.—No. 327. Locomotive-form boiler in depot, 624 and 626 Virginia avenue southwest, owned by the Robert Portner Brewing Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 70 pounds to square inch. Expires April 24, 1890.

April 24.—No. 328. Locomotive-form boiler in wood and coal yard, Virginia and Delaware avenue southwest, owned by Walter H. Marlow. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds, if necessary 70 pounds, to square inch. Expires April 24, 1890.

April 25.—No. 329. Vertical tubular boiler in brick-yard, owned by John Webster. Hydrostatic pressure, 80 pounds; working pressure allowed, 50 pounds to square inch. Expires April 25, 1890.

April 25.—No. 330. Vertical tubular boiler in feed store, Seventh street southwest, owned by Nixon Brewer. Hydrostatic pressure, 30 pounds; working pressure allowed, 75 pounds to square inch. Expires April 25, 1890.

April 29.—No. 331. New horizontal tubular boiler in brick-yard, N and South Capitol streets, owned by Winsor & Ford. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires April 29, 1890.

April 29.—No. 332. Horizontal flue boiler in brick-yard, O and South Capitol streets, owned by A. Richards & Co. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to square inch. Expires April 29, 1890.

April 30.—No. 333. Vertical tubular boiler on Little Giant excavator, No. 46, owned by W. H. Mohler, contractor. Hydrostatic pressure, 150 pounds; working pressure allowed, 95 pounds to square inch. Expires April 30, 1890.

May 1.—No. 334. Horizontal tubular boiler at gas-works, Twenty-sixth and G streets, used for hoisting purposes, owned by Washington Gas-Light Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 70 pounds to square inch. Expires May 1, 1890.

May 1.—No. 335. Horizontal tubular boiler in brick-yard, owned by A. Richards & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires May 1, 1890.

May 2.—No. 336. Locomotive-form boiler in wood and coal yard, I street, between Twenty-first and Twenty-second, owned by J. Maury Dove. Hydrostatic pressure, 9 pounds; working pressure allowed, 60 pounds to square inch. Expires May 2, 1890.

May 2.—No. 337. Vertical tubular boiler, foot of G street northwest, owned by J. Maury Dove. Hydrostatic pressure, 130 ponnds; working pressure allowed, 80 pounds to square inch. Expires May 2, 1890.

May 6.—No. 338. Horizontal tubular boiler in wood and coal yard, Twelfth and Water streets southwest, owned by Johnson Bros. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires May 6, 1890.

May 6.—No. 339. Vertical tubular boiler at Twelfth Street wharf, owned by Johnson Bros. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires May 6, 1890.

May 6.—No. 340. Vertical tubular boiler used by John W. Phillipps, contractor, for hoisting purposes. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires May 6, 1890.

May 8.—No. 341. Vertical tubular boiler in wood and coal yard, Fourteenth and C streets northwest, owned by J. Edward Chapman. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 8, 1890.

May 8.—No. 342. Locomotive-form boiler in building corner Seventh street and Louisiana avenue northwest, owned by Firemen's Insurance Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires May 8, 1890.

May 9.—No. 343. Locomotive-form boiler in car stable, Third and Canal streets southwest, owned by North O and South Capitol Street Railroad Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 9, 1890.

May 9.—No. 344. Vertical tubular boiler in wood and coal yard, Twelfth and C streets northwest, owned by Henry A. Clarke & Son. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Condemned for repairs; repaired and passed. Expires May 9, 1890.

May 13.—No. 345. Horizontal tubular boiler in Steam Carpet Cleaning Works, 488 Maine avenue southwest, owned by L. Rice. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires May 13, 1890.

May 13.—No. 346. Horizontal tubular boiler in soap factory, Water street, West Washington, owned by Weaver, Kengla & Co. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires May 13, 1890.

May 14.—No. 347. Vertical tubular boiler in slaughter-house, G and Fourth streets northeast, owned by Charles Johnson. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires May 14, 1890.

May 14.—No. 348. Horizontal tubular boiler in Panorama building, Fifteenth street and Ohio avenue northwest. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires May 14, 1890.

May 14.—No. 349. Vertical tubular boiler at Eighth Street wharf southwest, owned by Rich & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Condemned for repairs; repaired and passed. Expires May 14, 1890.

May 17.—No. 350. Vertical tubular boiler in wood and coal yard, Third and P streets northwest, owned by G. W. Appleby. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed. Expires May 17, 1890.

May 17.—No. 351.—Vertical tubular boiler in Washington Steam Coffee-Mill, owned by T. F. Browning. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 17, 1890

May 2 .—No. 352. Vertical tubular boiler in Boston Steam Laundry, corner New Jersey avenue and First street northwest, J. K. Korff, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 21, 1890.

May 21.—No. 353. Vertical tubular boiler in carriage factory, Pennsylvania avenue, between Third and Four-and-a-half streets northwest, owned by John McDermott & Bro. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires May 21, 1890.

May 21.—No. 354. Vertical tubular boiler in wood and coal yard, Twelfth street and Rhode Island avenue northwest, owned by P. Pollard & Son. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires May 21, 1890.

May 23.—No. 355. Vertical tubular boiler, used by George O. Cook, builder. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Used for hoisting purposes. Expires May 23, 1890.

May 24.—No. 356. Vertical tubular boiler in Palace Steam Laundry, 113 Four-and-a-half street southwest. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 24, 1890.

May 24.—No. 357. Vertical tubular boiler in grocery store, Pennsylvania avenue, between Sixth and Seventh streets northwest, owned by James L. Barbour & Son. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 24, 1890.

May 24.—No. 358. Horizontal tubular boiler in brewery, Twentieth street northwest, owned by C. Heurich. Hydrostatic pressure, 130 pounds; working pressure allowed, 75 pounds to square inch. Expires May 24, 1890.

May 27—No. 359. Vertical tubular boiler in dye works, 114 Four-and-a-half street northwest, owned by Birkner & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires May 27, 1890.

May 27.—No. 360. Vertical tubular boiler in Pacific building, F street northwest, owned by A. T. Britton & Gray. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 27, 1890.

May 27.—No. 361. Horizontal tubular boiler in St. James Hotel, Sixth street and Pennsylvania avenue northwest, Levi Woodbury proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 75 pounds to square inch. Expires May 27, 1890.

May 29.—No. 362. Locomotive-form boiler in soap factory, Buzzard Point southeast, owned by C. B. Jewell & Co. Hydrostatic pressure, 80 pounds; working pressure allowed, 40 pounds to square inch Expires May 29, 1890.

May 29.—No. 363. Horizontal tubular boiler in The Richmond, corner Seventeenth and H streets northwest, H. M. Cake proprietor. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires May 29, 1890.

May 29.—No. 364. Horizontal tubular boiler in Lenman building, 1425 New York avenue northwest, owned by J. T. Lenman. Hydrostatic pressure, 110 pounds; working pressure allowed, 50 pounds, if necessary 60 pounds, to square inch. Expires May 29, 1890.

May 29.—No. 365. Locomotive-form boiler in Ebbitt House. Hydrostatic pressure, 80 pounds; working pressure allowed, 45 pounds to square inch. Owned by C. C. Willard. Condemned for repairs; repaired and passed. Expires May 29, 1890.

May 31.—No 366. Horizontal tubular boiler in St. James Hotel, Sixth street and Pennsylvania avenue, Levi Woodbury proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 75 pounds to square inch. Expires May 31, 1890.

May 31.—No. 367. Horizontal tubular boiler in brewery, Twentieth street northwest, owned by C. Heurich. Hydrostatic pressure, 160 pounds; working pressure allowed, 75 pounds to square inch. Expires May 31, 1890.

June 1.—No. 368. Horizontal tubular boiler in Pacific building, owned by A. T. Britton & Gray. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires June 1, 1890.

June 4.—No. 369. Horizontal tubular boiler in The Richmond, H. M. Cake proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 4, 1890.

June 4.—No. 370. Horizontal tubular boiler in Lenman building, owned by J. T. Lenman. Hydrostatic pressure, 110 pounds; working pressure allowed, 50 pounds, if necessary 60 pounds, to square inch. Expires June 4, 1890.

June 5.—No. 371. Locomotive-form boiler in steam carpet cleaning works, Seventh and L streets southwest, owned by Chace & Bro. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires June 5, 1890.

June 6.—No. 372. Vertical tubular boiler in printing office, G street near Four-

teenth street northwest, owned by George E. Lemon. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 6, 1890.

June 8.—Nos. 373 and 374. Horizontal tubular boilers in Grand Army building, Pennsylvania avenue, between Fourteenth and Fifteenth streets northwest, owned by G. G. Cornwell & Son. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds each to square inch. Expires June 8, 1890.

June 10.—No. 375. Locomotive-form boiler in machine shop, Seventh street southwest, owned by Forsberg & Murray. Hydrostatic pressure 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for a new boiler; allowed to run six months. Expires December 10, 1889.

June 10, No. 376. Horizontal tubular boiler in planing-mill, Maryland avenue, between Four-and-a-half and Sixth streets, southwest, owned by Wood Bros. Hydrostatic pressure 120 pounds; working pressure allowed, 70 pounds to square inch. Expires June 10, 1890.

June 11—No. 377. Vertical tubular boiler in Electric Steam Laundry, 1007 E street, northwest, K. C. Smith, manager. Hydrostatic pressure 120 pounds; working pressure allowed, 50 pounds, if necessary 70 pounds, to square inch. Expires June 11, 1890.

June 14.—No. 378. Vertical tubular boiler in Capitol Steam Laundry, 512 Eighth street, owned by M. A. Weaver. Hydrostatic pressure 130 pounds; working pressure allowed, 80 pounds to square inch. Expires June 14, 1890.

June 14.—No. 379. Vertical tubular boiler in Dye Works, 906 G street northwest, owned by Anton Fischer. Hydrostatic pressure 110 pounds; working pressure allowed, 50 pounds, if necessary 60 pounds, to square inch. Expires June 14, 1890.

June 14.—No. 380. New horizontal tubular boiler in Dexter Steam Laundry, Sixth and C streets northwest, owned by H. M. Dexter. Hydrostatic pressure 150 pounds; working pressure allowed 80 pounds to square inch. Expires June 14, 1890.

June 14.—Nos. 381 and 382. Horizontal tubular boilers in Palais Royal, Twelfth street and Pennsylvania avenue northwest, owned by estate of A. D. Jessup, Philadelphia, Pa. Hydrostatic pressure 95 pounds; working pressure allowed, 60 pounds each to square inch. Expires June 14, 1890.

June 15.—No. 383. Vertical tubular boiler in dye works, 1205 New York avenue northwest, owned by Anton Lerch. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires June 15, 1890.

June 15.—No. 384. Horizontal tubular boiler in small building, corner Fourteenth and G streets northwest, owned by J. H. Small & Sons. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 15, 1890.

June 15.—No. 385. Locomotive-form boiler in building, Ninth and Water streets southwest, owned by the Smith National Cycle Manufacturing Company. Hydrostatic pressure 130 pounds; working pressure allowed, 60 pounds; if necessary 80 pounds, to square inch. Expires June 15, 1890.

June 17.—No. 386. Horizontal tubular boiler in mill, corner Four-and-a-half street and Virginia avenue southwest, owned by Washington Flour and Feed Company. Hydrostatic pressure 137 pounds; working pressure allowed, 85 pounds to square inch. Expires June 17, 1890.

June 17.—No. 387. Vertical tubular boiler in slaughter-house on Seventh street road, owned by A. Loeffler. Hydrostatic pressure 150 pounds; working pressure allowed, 80 pounds to square inch. Expires June 17, 1890.

June 18.—No. 388. Vertical tubular boiler in printing office, 623 D street, northwest, owned by S. F. Sheiry. Hydrostatic pressure 135 pounds; working pressure allowed, 80 pounds to square inch. Expires June 18, 1890.

June 18.—No. 389. Locomotive-form boiler in printing office 321 Four-and-a-half street northwest, owned by J. P. Wright. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 18, 1890.

June 19.—No. 390. Vertical tubular boiler in steam coffee mills, Four-and-a-half street, below Pennsylvania avenue, owned by W. E. Thomas. Hydrostatic pressure 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 19, 1890.

June 19.—No. 391. Horizontal tubular boiler in small building corner Fourteenth and G streets northwest owned by J. H. Small & Sons. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to the square inch. Expires June 19, 1890.

June 19.—No. 392. Horizontal tubular boiler at Littlefield's wharf, owned by the Barber Paving Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires June 19, 1890.

June 19.—No. 393. Locomotive-form boiler at Littlefield's wharf, owned by the Barber Paving Company. Hydrostatic pressure, 135 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds. Expires June 19, 1890.

June 20.—No. 394. Horizontal tubular boiler in Palais Royal, Twelfth street and

Pennsylvania avenue northwest, owned by A. D. Jessup's estate, 628 Chestnut street, Philadelphia, Pa. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires June 20, 1890.

June 21.—No. 395. New vertical tubular boiler in warehouse 50 and 52 H street northeast, owned by H. P. Pillsbury. Hydrostatic pressure, 150 pounds; working pressure allowed, 50 pounds, if necessary 80 pounds, to square inch. Expires June 21, 1890.

June 21.—No. 396. Locomotive-form boiler in wood and coal yard No. 12 H street northeast, owned by Kennedy Bros. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires June 21, 1890.

June 21.—No. 397. Vertical tubular boiler in bottling works Nos. 703 and 705 North Capitol street, owned by the Pabst Brewing Company. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 21, 1890.

June 21.—No 398. Vertical tubular boiler in machine-shop and foundry, Maine avenue southwest, owned by E. N. Gray & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires June 21, 1890.

June 24.—No. 399. Horizontal tubular boiler in the Washington Architectural Iron Works, Water and Thirty-third streets northwest, owned by Edward L. Dent. Hydrostatic pressure 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 24, 1890.

June 25.—No. 400. Vertical tubular boiler in steam bakery, 413 I street northwest, owned by Charles Schneider. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 25, 1890.

June 25.—No. 401. Horizontal tubular boiler (north boiler) in pump-house at gas-works, Twenty-sixth and G streets northwest, owned by Washington Gas-Light Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 75 pounds to square inch. Expires June 25, 1890.

June 25.—No. 402. Vertical tubular boiler in grocery store, No. 946 to 950 Louisiana avenue northwest, owned by S. H. Walker & Co. Hydrostatic pressure, 140 pounds; working pressure allowed, 60 pounds if necessary 80 pounds, to square inch. Expires June 25, 1890.

June 26.—No. 403. Horizontal tubular boiler in machine-shop and foundry, owned by Beckham & Middleton. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires June 26, 1890.

June 26.—No. 404. Vertical tubular boiler in saw-mill, Thirtieth street, West Washington, owned by W. H. & C. R. Schutt. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds, if necessary 70 pounds, to square inch. Expires June 26, 1890.

June 26.—No. 405. Vertical tubular boiler at wharf in West Washington, owned by Independent Ice Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires June 26, 1890.

June 26.—No. 406. Vertical tubular boiler in wood and coal yard, First street and Virginia avenue southwest, owned by Wm. A. Eliason & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 26, 1890.

June 27.—No. 407. Locomotive-form boiler in stone-crushing works, Water street, West Washington, owned by H. P. Gilbert. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires June 27, 1890.

June 27.—No. 408. Horizontal tubular boiler in 924 D street northwest, owned by Adams Express Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 40 pounds, if necessary 60 pounds, to square inch. Expires June 27, 1890.

June 28.—No. 409. Vertical tubular boiler in Excelsior Steam Laundry, 1739 L street northwest, Mrs. Simmons, proprietress. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 28, 1890.

June 28.—No. 410. Horizontal tubular boiler in car-stables in West Washington, owned by Metropolitan Railroad Company. Hydrostatic pressure, 125 pounds; working pressure allowed 75 pounds to square inch. Expires June 28, 1890.

June 28.—No. 411. Locomotive-form boiler in wood and coal yard at wharf, foot of Sixth street southwest, owned by G. L. Sheriff. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Condemned for repairs; repaired and passed. Expires June 28, 1890.

June 28.—No. 412. Vertical tubular boiler in slaughter-house, Twenty-second street, between O and P streets northwest, owned by G. L. Botsch. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 29, 1890.

June 28.—No. 413. Vertical tubular boiler in slaughter-house, Twenty-second and O streets northwest, owned by J. J. Pfleuger. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires June 29, 1890.

June 29.—No. 414. Horizontal tubular boiler in 624 D street northwest, owned by

Adams Express Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 40 pounds, if necessary 60 pounds, to square inch. Expires June 29, 1890.

I have the honor to state that this year has been the most successful since I have been the inspector. I have had no trouble in the performance of my duties, as every one seems willing to assist, and especially the engineers since they have been licensed.

For bettering the condition of the office, I would most respectfully recommend to the honorable Commissioners that an order be issued to all persons using or owning steam-boilers that they shall notify the inspector five days prior to expiration of certificate of inspection of their boilers.

Respectfully submitted.

JOHN H. WILKERSON,
Steam-Boiler Inspector.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

WASHINGTON, D. C., *August* 14, 1889.

GENTLEMEN: I have the honor to make the following report for year ending June 30, 1889:

Fee boilers inspected	414
Boilers condemned for repairs	14
Boilers condemned as unfit for use	4
New boilers erected	42
Explosions	0

RECEIVED:

Fee boilers inspected, 414; fee, $5 each	$2,070.00
Lost—inspection of 9 boilers, at $5	45.00
Total	2,025.00

EXPENDED:

Care of horse at livery, $5 per week	260.00
Labor	429.00
Repairs of wagon and painting	35.00
Shoeing horse during year	15.00
Two Stilsen wrenches, $1.65 each	3.30
Hose and couplings	2.80
Printing and stationery	10.00
Total	$746.10

Total amount received	2,025.00
Total amount expended	746.10
Profit	1,278.90

I have the honor to state that this year has been the most successful year since I have been the inspector. I have had no trouble in the performance of my duties, as every one seems willing to assist, and especially the engineers since they have been licensed.

For bettering the condition of the office, I would most respectfully recommend to the honorable Commissioners that an order be issued to all persons using or owning steam-boilers that they shall be required to notify the inspector at least five days prior to expiration of the certificate of their boilers.

I would also recommend that engineers' licenses be renewed every year, as it is a general custom in all cities where licenses are issued to renew them each year, as I believe it would be a great benefit to the office as well as the engineers; and for renewal of licenses a fee of one dollar should be charged, but in granting new licenses the fee shall remain the same, according to our law governing steam-engineering in the District of Columbia.

I would further recommend that every owner, agent, or other person having charge of and operating any stationary or portable steam-boiler used for drilling, excavating, hoisting, or other purpose, and every steam-boiler within the District of Columbia which is required to be tested by law shall have firmly placed and permanently secured upon such boiler a metal number or numbers corresponding with the said boiler as it is recorded upon the books of the boiler inspector. Every failure to com-

ply with the provisions of this ordinance shall be deemed a misdemeanor, and shall be punished, on conviction thereof, by a fine not exceeding $25 for each offense, or, in default of payment of such fine, by imprisonment not exceeding ten days.

(2) This ordinance shall take effect July 1, 1890.

For year ending June 30, 1890, I would make the following estimate for the office:

One new wagon	$125
Care of horse at livery, at $5 per week	260
Labor	480
Printing and stationery	10
Shoeing horse, $15; tools for wagon, $10	25
Total	900

Respectfully submitted.

JOHN H. WILKERSON,
Steam-Boiler Inspector.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF THE SUPERINTENDENT OF SEWERS.

DISTRICT OF COLUMBIA, ENGINEER DEPARTMENT,
Washington, October 31, 1889.

SIR: I have the honor to submit the following report of the operations of the sewer division for the year ending June 30, 1889, with estimates for the fiscal year ending June 30, 1891.

CLEANING AND REPAIRING SEWERS AND BASINS.

Appropriation for fiscal year 1888–'89		$30,000
Pipe sewers cleaned	linear feet	121,226
Brick sewers cleaned	do	3,356
Pipe sewers taken up and relaid	do	1,401
Receiving basins cleaned		39,573
Receiving basins repaired		281
Manholes constructed		8
Manholes repaired		67
Brick sewers repaired	linear feet	443
Manhole covers reset		12
Minor repairs to sewers		354
Large catch-basins cleaned		5
Receiving-basins constructed		32
New covers for basin set		5

Among the larger repairs may be mentioned the partial reconstruction of the northeast branch of the Georgetown main sewer. The portions of this sewer which were in most urgent need of repair were rebuilt from the inside. This work must be continued until this sewer is placed in good condition throughout its length.

The reconstruction of the sewer on Fourteenth street northwest, between H and I streets, is also a work which should not be longer delayed, and to accomplish these works, in addition to the yearly increasing amount of sewers and their appurtenances to be kept clean and in repair, I respectfully urge that the sum of $40,000 may be appropriated for work under this heading during the fiscal year 1890–'91.

REPLACING OBSTRUCTED SEWERS.

Appropriation for fiscal year 1888–'89		$10,000
Under this appropriation there was constructed under contract 954:		
12-inch pipe sewers	linear feet	1,290.3
15-inch pipe sewers	do	582
18-inch pipe sewers	do	759
By day labor work there were replaced:		
8-inch pipe sewers	linear feet	159
12-inch pipe sewers	do	2,844
15-inch pipe sewers	do	541
18-inch pipe sewers	do	1,233
In the list of sewers to be replaced when funds become available there are:		
12-inch pipe sewers	linear feet	12,000
15-inch pipe sewers	do	6,100
18-inch pipe sewers	do	2,000

I estimate the cost of replacing these sewers to be $25,000, and respectfully request an appropriation of that amount.

MAIN AND PIPE SEWERS.

Appropriation for fiscal year 1888–'89 ..... $70,000

Under this appropriation there was constructed under contracts Nos. 952, 954, 956, 957, and 972:

12-inch pipe sewers	linear feet	19,605.5
15-inch pipe sewers	do	3,649.6
18-inch pipe sewers	do	4,058.8
20-inch pipe sewers	do	650.5
21-inch pipe sewers	do	400
24-inch pipe sewers	do	2,506.2
2 by 3 feet concrete sewer	do	1,030.83
2.25 by 3.37 concrete sewer	do	1,202.7
2.5 by 3.75 concrete sewer	do	569.9
2.75 by 4.12 concrete sewer	do	293.17
3 by 4.5 concrete sewer	do	799
Basin connections	do	194
Receiving basins		50

There was performed by day labor the following described work:

6-inch pipe sewers	linear feet	60
8-inch pipe sewers	do	993
12-inch pipe sewers	do	1,981
15-inch pipe sewers	do	673
18-inch pipe sewers	do	199
24-inch pipe sewers	do	319
Man-holes		32
Receiving basins		42

Estimates for 1890–'91.

MAIN AND PIPE SEWERS.

Pennsylvania avenue between Seventeenth and Eighteenth streets	$4,675
L street, northeast, between, Third and Boundary streets	16,885
K street, northwest, between Fourth and New Jersey avenue	12,300
Fourteenth street, southeast, from river northward	15,000
Ninth street, southeast, from river northward to N street	4,000
Improving Boundary sewer outlet including condemnation of right of way	15,000
Terra cotta pipe sewers	50,000
Receiving basins	10,000
Total	127,860

The sewer proposed for Pennsylvania avenue between Seventeenth and Eighteenth streets is to take the place of the present sewer which is faulty both in gradient and size.

The sewers proposed for L street, northeast, and Fourteenth street, southeast, will provide trunk sewers for rapidly growing areas in the northeastern and southeastern sections of the city. The sewer proposed for K street, northwest, will relieve the overcharged sewers on Third and Fourth streets. The construction of the sewer on Ninth street, southeast, is for the purpose of extending the Ninth street sewer to deep water in the Eastern Branch. The Boundary sewer discharges into a water course situated in part upon private property; it is proposed to deepen and straighten this channel, and to acquire possession of a strip of land, of sufficient width, from the sewer to the Eastern Branch.

CONSTRUCTION OF SUBURBAN SEWERS.

Appropriation for fiscal year 1888'–89.

Under this appropriation there was constructed under contracts Nos. 952, 954, 956, 971, and 1012:

12-inch pipe sewers	linear feet	1,514.5
15-inch pipe sewers	do	1,667.7
18-inch pipe sewers	do	755.4
24-inch pipe sewers	do	1,610
3 by 4.5 feet concrete sewers	do	1,199.7
4 by 6 feet concrete sewers	do	85.7
7.61 feet diameter concrete sewers	do	864.22

By day labor there was constructed:

12-inch pipe sewers	linear feet..	2,818
15 inch pipe sewers	do....	104
18-inch pipe sewers	do....	330
24-inch pipe sewers	do....	146
Receiving basins	do....	16

Estimates for 1890–'91.

SUBURBAN SEWERS.

Extension of sewer on Bladensburg road	$3,850
Extension of sewer on line of Eleventh street, northeast	15,000
Extension of sewer in Eckington Valley	15,000
Construction of sewer on Lincoln avenue	3,000
Construction of sewer on Fourteenth street road	18,000
Extension of sewer in Rock Creek Valley	10,000
Extension of Anacostia main sewer	7,000
Construction of pipe sewers	15,000
Total	86,850

The sewer on Bladensburg road is necessary for taking care of the drainage carried by the deep ravine on the west side of the road and to enable the surface department to improve the lower section of this road. The extension of the sewer in the Eleventh street valley northward, from Boundary street, northeast, will take care of the drainage and sewerage now discharged into the open stream north of Boundary street and causing a nuisance to exist there.

The extension of the sewer in Eckington Valley is recommended on account of the rapid improvement of property in this valley.

The sewer on Lincoln avenue is required for the drainage of Lincoln avenue and of R street from Lincoln avenue eastward.

The sewer on Fourteenth-street road will provide for the surface drainage of the greater part of Mount Pleasant, and will divert surface water, now carried by the sewer on Eighth street, extended, overcharging the same during heavy storms, to Piney Branch.

The Anacostia main sewer is required in order that the streets near the line of the ravine through Anacostia, viz: Adams and Jackson streets, may be improved.

The extension of the Rock Creek sewer will carry this trunk sewer to Massachusetts avenue extended.

SEWER CONSTRUCTED UNDER THE PERMIT AND COMPULSORY SYSTEMS.

Allotment from appropriation		$25,000.00
Constructions under these systems:		
8-inch pipe sewers	linear feet..	5,205
12-inch pipe sewers	do....	22,301
15-inch pipe sewers	do....	280
18-inch pipe sewers	do....	63
24-inch pipe sewers	do....	90
Man-holes		251
Catch-basins		13
Cost of above work to property owners		$18,092.11
Cost of above work to District of Columbia		16,376.86
Total cost		34,468.97
Amount returned to depositors		1,670.17

I respectfully suggest that $35,000 be requested for sewers under the permit and compulsory system for the fiscal year 1890–'91.

An appropriation of $5,000 was included in the appropriation bill for 1888–'89, for the "preparation of plans for sewage disposal." It was proposed, under this appropriation, to locate the older sewers, the office records of which were defective; to gauge the low-water discharge from the main sewers; to gauge the discharge of the Potomac River; to make a series of float observations in the river, and to suggest a plan for improving the present method of sewage disposal.

The bill was passed late in the summer of 1888, and the gaugings of the river and sewers were of necessity deferred until the following spring.

Float observations were commenced in April, but the high stages of water in the river, due to the storms of June and July, compelled a suspension of the work at a time when ordinarily the best results should have been obtained.

The appropriation being for a specific object was not considered by this office one that would lapse if not expended within the fiscal year 1888–'89, and it was our intention to make the necessary observations when the state of the river rendered it practicable. The Treasury Department, however, held that the appropriation could be used only within the fiscal year 1888–'89, so further operations under it were suspended indefinitely. A report of the work performed, with general recommendations, is now being prepared and will be submitted at an early date.

I respectfully request that an appropriation of $3,000 be made for the observation of the discharge of sewers in connection with observations of rain-fall, in order that the relation of the discharge from the water-sheds to the amount of water falling upon the same may be established.

This relation at present is assumed to be represented by an empirical formula founded on very general assumptions with very little of positive information in support of the same.

As our practice in proportioning sewers is believed to give sizes somewhat greater than may actually be required (and in the present state of our knowledge any other course would seem to be unsafe), if these relations can be established within reasonable limits the probable reduction in sizes in storm sewers to be constructed in the future will more than cover the cost of these observations.

I again respectfully call attention to the fact that no specific appropriation is made for the support of the sewer division, the cost of which is distributed among the various items pertaining to sewers for which appropriations are made. The sewer division is one of the branches of the engineer department which must of necessity be continuing in its character as the organization to maintain, repair, and clean the sewers and their appurtenances, as well as to devise plans for the expansion of the system, and to supervise the constructions incident thereto. I respectfully transmit a list of officers and employés required, and request that specific appropriation be made for the same:

Superintendent of sewers	$2,400
General inspector	1,500
Two clerks	2,400
Two assistant engineers	3,000
Two rodmen	1,560
Two axemen	1,300
Two inspectors of property	1,868
Two sewer-tappers	2,400
One permit clerk	1,200
One draughtsman	1,500
Total	19,128

Summary of estimates for fiscal year 1890–'91.

Cleaning and repairing sewers and basins	$40,000
Replacing obstructed sewers	25,000
Main and pipe sewers	127,860
Suburban sewers	86,850
Compulsory sewerage and permit work	35,000
Dredging James Creek Canal	18,000
Gauging sewers and rain-fall	3,000
Sewer division salaries	19,128
Total	354,838

If specific provision be not made for the salaries of the employés of the sewer division the four items at the head of this list should be increased to cover the same, as follows:

Cleaning and reparing sewers and basins	$42,733
Replacing obstructed sewers	26,708
Main and pipe sewers	136,604
Suburban sewers	92,793

Respectfully submitted,

D. E. McCOMB,
Acting Superintendent of Sewers.

The ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA.

REPORT OF THE SUPERINTENDENT OF LAMPS.

WASHINGTON, D. C., *August* 15, 1889.

MAJOR: I have the honor to submit the following annual report of the operations of division of street-lighting during the fiscal year ended June 30, 1889:

The receipts from all sources on account of street-lighting amounted to $136,961.32, and the expenditures to $136,294.41, leaving an unexpended balance of $666.91, of which $418.10 was from the appropriation for electric street-lighting, and $258.81 from the appropriation for gas and other illuminating materials.

The following statements show in detail the receipts and expenditures on account of street-lighting, under the respective divisions, as prescribed in the appropriation bill:

Receipts and expenditures on account of street-lighting during the fiscal year ended June 30, 1889.

Date.	Receipts.	Amount.	Date.	Expenditures.	Amount.
1888.			1889.		
July 1	To appropriation	$105,000.00	June 30	By Washington Gas-Light Company, for street-lighting to date.	$87,075.96
	Baltimore and Potomac Railroad Company, amount refunded.	1,384.97		Georgetown Gas-Light Company, for street-lighting to date.	8,350.95
	Baltimore and Ohio Railroad Company, amount refunded.	571.60		Wheeler Reflector and Light Company, for street-lighting to date.	1,176.49
	John Dugan, lantern destroyed.	4.75		Washington Gas-Light Company, for erecting and moving lamps.	3,263.71
				Georgetown Gas-Light Company, for erecting and moving lamps.	232.80
				George White and sons, for purchase of lamp-posts.	3,395.70
				Wheeler Reflector and Light Company, for purchase of lanterns.	2,299.00
				H. I. Gregory, for purchase of street designations and frames.	624.00
				Conrad Kauffmann, for repairing and repainting lanterns.	141.90
				Pay-rolls, expense of erecting posts for oil-lamps.	142.00
				Balance	258.81
	Total	106,961.32		Total	106,961.32

Receipts and expenditures on account of electric street-lighting during the fiscal year ended June 30, 1889.

Date.	Receipts.	Amount.	Date.	Expenditures.	Amount.
1888.			1889.		
July 1	To appropriation	$30,000.00	June 30	By United States Electric Lighting Company, for street-lighting to date.	$28,850.15
				Expenses of inspection:	
				W. C. Hazel, purchase of horse.	175.00
				McDermott Bros., purchase of buggy.	225.00
				Lutz & Bro., purchase of harness, etc.	63.75
				E. M. Talcott, inspector	96.00
				L. G. Stanhope, inspector	160.00
				A. G. McKenzie, inspector	12.00
				Balance	418.10
	Total	30,000.00		Total	30,000.00

During the year 372 new gas lamps were erected, at a cost of $3,024.84. The following table shows the sections in which they were erected and the amount expended in each section:

Section.	Number.	Cost.
Northwest	171	$1,427.64
Northeast	61	469.70
Southeast	10	77.00
Southwest	67	568.40
Georgetown	14	107.80
Suburban roads and streets	49	374.30
Total	372	3,024.84

The experiment of lighting streets, alleys, and suburban roads in which gas mains have not been laid with oil lamps has been tried during the year with the most gratifying success. One hundred and ninety oil lamps were erected and maintained under a contract with the Wheeler Reflector and Light Company, of Philadelphia, Pa., and have given entire satisfaction, and applications have been made for their introduction in other sections of the District still unsupplied with gas.

The following statement shows the sections in which these lamps have been erected:

Northwest	22
Northeast	23
Southeast	15
Southwest	92
Suburban roads and streets	22
Total	174

The expense of erecting these lamps is small, while the great benefit derived from their use fully justifies their further introduction in unlighted localities.

The following statement shows the number of hours the gas and oil lamps were lighted during the year:

Month.	Schedule.	Extra.	Total.
1888.	*H. M.*	*H. M.*	*H. M.*
July	134 15	13 00	147 15
August	157 15	12 00	169 15
September	176 45	22 30	199 15
October	200 00	35 45	233 45
November	206 45	43 45	250 30
December	238 00	28 30	266 30
1889.			
January	229 15	37 30	266 45
February	204 00	40 00	244 00
March	229 45	60 00	289 45
April	173 30	36 30	210 00
May	147 15	23 15	170 30
June	136 30	14 00	150 30
Total	2,233 15	366 45	2,600 00

During the year the sum of $694.50 was deducted from the bills of the various companies under contract for lighting the streets on account of failure of service as follows:

Company.	Lamps not lighted.	Hours not lighted.	Penalty.
Washington Gas-Light Company	35	237	$11.85
Georgetown Gas-Light Company	111	681	34.05
United States Electric Lighting Company	1,398	7,404	648.60
Total	1,544	8,322	694.50

On account of change of grade and widening the sidewalks on many streets it was necessary to change the location of 69 public gas lamps, at an expense of $471.67, as follows:

Northwest section	7
Northeast section	3
Southeast section	27
Southwest section	20
Georgetown	6
Suburban streets and roads	6
Total	69

The following statement shows the increase in the number of lamps in service June 30, 1889:

Lamps in service July 1, 1888	4,710
New lamps lighted during year	433
Relighted during year	22
Discontinued during year	224
In service June 30, 1889	4,941
Not in service July 1, 1888	244
Not in service June 30, 1889	468
Net increase of lamps in service June 30, 1889	231

ELECTRIC LIGHTING.

The number of electric lights in service on July 1, 1888, was 105. The number in service June 30, 1889, was 177.

The company will have all its wires underground by September 30, 1889, and I recommend that it be directed to remove its old overhead lines and surplus poles after that date. The number of hours the electric lights were lighted during the year was 4,286.

The following statement shows the total number of lamps of all kinds maintained under contract by the District of Columbia:

Kind.	In service July 1, 1888.	In service June 30, 1889.	Increase.
Gas lamps	4,710	4,941	231
Oil lamps		187	187
Electric arc lights	105	177	72
Total	4,815	5,305	490

Attention is called to the urgent necessity of increasing the hours of street-lighting from 2,600 to 3,200 hours. During the summer season the density of the shade-trees interferes very seriously with the street lamps at all times, but if a storm arises suddenly during the hours in which the moon is relied on for light, the streets are left in utter darkness. Frequent complaints are made by citizens of this evil, but under the circumstances no improvement can be made.

It seems to me that the District government should have some power to compel the gas companies to lay mains on such streets as it may desire to improve and light, and also control the size of such mains. Many streets in Gorgetown are supplied with gas through 1-inch pipes, which are totally inadequate for the service required. The Washington Gas-Light Company has always evidenced a desire to extend its mains whenever the public interests demanded, and its service is generally of the highest character, but that of the Georgetown Company is not fully up to the proper standard. In this connection I respectfully recommend that a map showing the exact location of all mains and public lamps be prepared, and that the companies be required to report to theEngineer Commissioner the exact location of any proposed new mains, at the time application is made for the necessary permit.

There are many streets on which the public lamps have been located at too great distance from each other, and this evil should be gradually remedied by a re-arrangment of the lamps. The average distance between electric lights is 200 feet, and the candle powe · 1000. The average distance between gas lamps is probably 160 feet, and the candle-power 16. A glance at these figures will at once make it apparent that a closer location of the lamps is imperatively demanded.

The rapid growth of the city and extension of suburban roads, will require the erection of a much larger number of lamps during the fiscal year 1890-91 than ever before, and the following estimates are based upon such contemplated increase and present contract prices for materials:

ESTIMATES FOR STREET LIGHTING, 1890-'91.

Maintenance of 5,600 street lamps	$112,000
Maintenance of 600 new street lamps	9,000
Purchase of 600 lamp-posts	3,600
Purchase of lanterns	2,500
Erection of lamp-posts (gas and oil)	3,000
Painting lamp-posts and lanterns and purchase of street designations	1,500
Total	131,600

The number of electric lights contracted for for the year 1889-'90 is 181. In consequence of an error in engrossing the appropriation bill for the current year it was necessary to cut off 13 lights on E street, Tenth street west, Thirteenth street west, and Thirty-second street west in order to relight part of the electric lights on the south side of Pennsylvania avenue between First and Fifteenth streets. Should these lights be again started, with 9 still unlighted on the south side of Pennsylvania avenue between First and Fifteenth streets, the number of lights to be provided for in 1890-'91 will be 203. The amount required for this service will be $44,557, exclusive of the necessary expenses of inspection, making a total for street lighting (1890-'91) of $176,157.

Very respectfully,

W. H. HARRISON,
Superintendent of Lamps.

The ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA.

REPORT OF THE INSPECTOR OF ASPHALT AND CEMENTS.

WASHINGTON. D. C., *September* 30, 1889.

MAJOR: I have the honor to submit the following report upon the operations of my office to date:

Owing to the more thorough methods of inspection developed during the past two years the amount of work necessarily undertaken, both in the field and in the laboratory, has largely increased.

Following is a statement of the number and character of specimens of materials examined and reported on during the past year:

Material in use in concrete pavements	306
Hydraulic cements	551
Waters	278
For the health officer	20
For the superintendent of police	2
From miscellaneous sources	51
Illuminating oils by the fire marshal	493
Total	1,701

The expense for chemicals and for replacing apparatus in carrying on so much work will necessitate the expenditure of a considerable sum during the coming year, and I recommend that an item be introduced into the estimates for appropriations for 1890-'91 of $500 "for the purchase of laboratory supplies and repairs necessary in the office of the inspector of asphalt and cements."

NATURE OF THE WORK.

A large proportion of the duties of this office has naturally been the inspection of the materials in use in the concrete pavements, of the method of laying them, and of a study of the whole subject with a view to its development on lines of advancement and improvement. The results which have been obtained and collected are of great interest, but do not as yet establish any facts upon such a firm basis as to make their publication desirable. I have already communicated to you some of the conclusions which I have derived from them.

Examination of the various sources of water supply of the District and inspection of the hydraulic cement in use in the public works form the principal remaining subjects upon which it is necessary to report, and these will be considered under separate heads. On the quality of the illuminating oils the fire marshal will make a suitable report.

WATERS.

During the past two years nearly 500 water analyses have been made in this office, comprising—

Potomac water	91
Bad or questionable wells	118
Good wells	41
Four selected springs	65
Ten typical wells	153

and a number of miscellaneous samples.

The results have been collected and presented in this report as furnishing interesting information in regard to the various sources of water supply in the District, and as forming a standard or basis from which to judge of the character of waters examined in the future and for comparison with waters in other localities.

Before entering upon the consideration and discussion of these results a short statement in regard to the origin and classification of waters and the method of analysis practiced must be given.

Natural waters can be divided into four classes:

Rain-water, including all precipitations from the atmosphere.

Surface water, as found in streams and all bodies of water.

Ground water, as found in the soil at moderate distances below the surface.

Spring water or deep water, rising from or accumulated at considerable depths below the surface.

Rain-water we have little to do with in cities, except when, as is rarely the case, it is collected in cisterns. When collected in the country it is quite a pure form of water, but in thickly built-up towns it becomes very much contaminated.

Surface water is the collection in streams of rain-water after it has flowed over or through the ground, together with such spring water as may have united therewith, and contains a certain proportion of dissolved and suspended mineral and organic matter. In uninhabited mountainous districts the contamination of the water is slight and surface waters are pure, but as the forests are cut off, allowing denudation and washing of soil and contamination from animal and manufacturing sources the purity decreases and frequently the water becomes filthy; so surface water may be found of all standards of purity. As a rule the amount of solids is small, as well as the chlorides and nitrates, nitrites being usually absent, while the organic contamination may reach high figures.

Ground water depends entirely on the character of the soil in which it occurs. The soils of cities are always dirty from continued pollution, so that the water of the layers nearer the surface, such as is found in shallow wells, is always contaminated with the soluble products of the oxidation of filth and sewage as appears from the large proportion of solids in solution, consisting of chlorides, nitrates, and ammonia salts, and, when the pollution is actively going on, of larger proportions of ammonia salts, and especially nitrites, which are the distinctive signs of active and present oxidation of filth containing nitrogenous organic matter. It is this organic matter, together with the chlorine which accompanies it, that furnishes us by its decomposition products the means of detecting the presence or previous presence of filth.

It is hardly necessary in this place to go into an explanation of the relations of these bodies to each other, and how one form may be changed into another under the influences of micro-organisms and oxidation or reduction. When the oxidation has been carried to the extreme, and only nitrates are present, the water may be quite harmless, although the previous contamination may have been large; but when nitrites are present they are a sign that oxidation and nitrification are in progress, and that recent contamination may be counted upon.

Deep water and spring water are far removed from those sources of contamination common to the shallow-ground waters, unless they become contaminated in reaching the surface, which by proper protection can be prevented. They may contain large quantities of chlorine of mineral origin, in no way an indication of sewage, and small amount of nitrates and even of nitrites which persist in deep waters and do not mean as much as in other waters, forming no basis for condemnation.

ANALYTICAL DETERMINATIONS AND METHODS.

In judging the quality of water the following determinations are those most frequently made: (1) Clearness, color, and odor; (2) hardness; (3) total solids and loss on ignition; (4) organic carbon; (5) organic nitrogen; (6) free ammonia; (7) albu-

minoid ammonia; (8) oxygen required to oxidize organic matter; (9) nitrogen as nitrites; (10) nitrogen as nitrates; (11) chlorine; (12) phosphates; (13) dissolved oxygen.

To make these determinations successfully certain precautions must be observed, one of the most essential being care in the collection of a proper sample. It must represent the water as it is used or occurs, without contamination with any foreign matter. Glass-stoppered bottles, known as Winchester quarts, used for acids by manufacturing chemists, are most suitable for holding samples, but in case these are not available a new demijohn and fresh cork will do. Earthenware of any description is inadmissible. In any case thorough washing with boiling water is a necessary preliminary, followed by several rinsings at the source with the water to be collected. The bottle must be entirely filled, stoppered, and brought to the laboratory at once, in order that the analysis may be made within a few hours after collection and before any of the rapid changes in the more easily oxidizable constituents can take place. If it is absolutely necessary to keep the sample some time, it should be in a cold and dark place. Two quarts are a sufficient amount. Precautions should be taken in the case of wells to pump the water for some time before collecting, and with streams and ponds to submerge the bottle as far as possible below the surface In all cases agitation with air should be avoided.

The character of the surroundings or any conditions having an influence on the water, such as adjacent sewers, cesspools, dwellings, stables, or factories should be noted and accompany the sample.

The method of making the actual determinations will not be described at length. Those who desire information on the subject will find in "Examination of Water for Sanitary and Technical Purposes, by Henry Leffmann and William Beam. Philadelphia: P. Blakeston Son & Co., 1889," a most excellent and concise statement of the best methods. Where any departure from these has been made it will be mentioned.

CLEARNESS, COLOR, AND ODOR.

Observations of these physical characters are of decided value in judging of the character of waters. A clear, colorless, and odorless water is of course the most desirable, but these conditions are seldom found except in surface water from mountainous regions with rocks that are not easily acted on, and in some springs and deep wells. Well waters as a rule have a tint when seen through a 2-foot tube, but even if they have not cannot be pronounced pure, some of the most sparkling water being seriously contaminated. As a general rule, surface waters have a color, are often not clear, and at times have a decided odor. With this class of waters color seems to be a most important point to observe. Drown* has called attention to the fact that such waters, when they have a deep color and a high percentage of albuminoid ammonia, may not be dangerous when they would be decidedly so were there the same amount of albuminoid ammonia and no color; that is to say, the contamination is due to organic matter of a harmless nature.

This organic matter, however, under a hot sun, may become decomposed so as to produce decided intestinal disturbances, as will be seen in some cases of our aqueduct water. As a means of indicating degrees of color, Drown has proposed comparing the water in its natural condition with different depths of Nesslerized standard ammonia, and gives some figures showing the decrease in the amount of albuminoid ammonia produced by the removal of color from water by hydrate of alumina. A water with a color of 1.2 on his scale gave .296 parts of albuminoid ammonia per million. After removal of the color, it gave only .048 parts, 84 per cent. of the whole being removed, and the same result was obtained with artificial solutions. With Potomac water, I have obtained a reduction of from .108 to .068, not as great as with the peaty waters of Massachusetts, but still striking.

Odor may give some clue to the origin of contamination, whether animal or vegetable. It is detected by shaking the water in a half-empty flask for some time and then examining. Heating to the boiling point also reveals odors not detected at lower temperatures. Turbidity, due to mechanical suspension of impurities, is common in such waters as the Potomac. Its degree is best observed by the use of a 3-foot tube, the number of inches of water through which an object can be seen representing its turbidity or clearness.

It must be remembered that the water of most perfect appearance may not compare sanitarily with one that is brown and peaty.

TOTAL SOLIDS.

Total solids, or the solid matter soluble in the water, has been determined by evaporating 100 cubic centimeters in a platinum dish on the water bath, wiping dry and weighing. Salts in the residue which retain crystal water at this temperature are of

*Jour. N. E. Water Works Assoc., Vol. 2, No. 3.

course under these conditions so weighed, but a general uniformity is obtained which is as satisfactory as that at any other temperature and much more certain. Excessive proportions of solids are undesirable, and those waters having over 600 parts per million have been placed by me among the questionable ones, the salts in the District being largely lime and magnesia, chlorides, and sulphates. The wells are not a few where 1,000 parts of mineral salts are found and one at least has been largely used as of supposed medicinal value. Owing to inaccuracies the amount of solids certainly can not be depended on within 10 parts per million in most cases.

LOSS ON IGNITION.

Unless perhaps practiced as recommended by Drown,* this determination as a quantitative one, is of little or no value, and has not been carried out. Th character of the odor given off on heating, and the color or manner of charring may furnish considerable information in regard to the organic matter present, a smell like burning nitrogenous organic matter of course pointing to contamination of a serious description, while the odor of non-nitrogenous vegetable substances is not as alarming.

FREE AND ALBUMINOID AMMONIA.

The method of determining free and albuminoid ammonia or nitrogen from ammonium compounds, described by Leffmann and Beam, seems to be a very excellent one. In this laboratory, however, the old retort method has been practiced with the condenser and retort so arranged as to have a close water-seal joint. It seems hardly necessary to say that the apparatus used for this purpose should never be used for anything else if possible; never taken apart and kept in a room entirely free from ammonia. Where this is impossible a distillation with good clear water should be carried out until the apparatus is ammonia free before beginning an analysis. In almost all the analyses here recorded the entire amount of free ammonia has come over in the first 50 cubic centimeters distilled from 250 cubic centimeters, but a second has always been taken off. Where waters are not alkaline some pure ignited carbonate of soda must be added, but in waters found about Washington this has usually been found unnecessary. In determining albuminoid ammonia or nitrogen by alkaline permanganate the greatest care is necessary in the preparation of the alkaline reagent. It should be made up of much larger bulk than eventually required and boiled down until the distillate is absolutely free from ammonia, and there allowed to stay, never making up to a definite volume by the addition of water. Leffmann and Beam's method of boiling down a small amount for each analysis seems to me to involve the possibility of frequent error.

It has been rare that more than traces of ammonia have been found in the second distillate of 50 cubic centimeters for albuminoid ammonia. Where this has occurred it has been noted.

Two hundred and fifty cubic centimeters seem to me to be amply sufficient for these determinations, to save much bulk and time, and has proved generally satisfactory. Collection in amounts of 25 cubic centimeters instead of 50 cubic centimeters would no doubt be an improvement as affording a better differentiation of the evolution of ammonia and a statement of the results in terms of nitrogen instead of ammonia be better for purposes of comparison.

Free ammonia and its salts are not found in the good waters of this neighborhood to a great extent even in the deep wells. Its presence seems to point generally to putrefactive changes in organic matter derived from surface contamination not of animal origin, such as storm water from street gutters, etc.

Often the correction of this defect by the protection of the well has removed the excess of this form of nitrogen. Another common source is the growth of roots of trese into a well, as at Fifth and T streets, northwest, when an immediate and large increase occurs, and a good well is permanently ruined. The presence of free ammonia in well water seems therefore to be with us a ground for adverse judgment. Albuminoid ammonia points to the presence of nitrogenous matter not yet entirely decomposed. It may be of vegetable or animal origin. If the oxygen consuming point is high, and the chlorine not above the amount found in good waters in the immediate locality, while color, smell, and appearance on ignition are characteristic, it may be inferred that the contamination is chiefly of vegetable origin. Under these circumstances, nitrates may be present in considerable amount, but nitrates are usually small. The series of analyses of the well at Fifth and Q streets, which was full of roots, illustrate organic contamination.

On the other hand, if chlorine is abnormally high, oxygen consumed low, and, in the case of wells, nitrates high, the contamination is quite probably of animal origin, and the water unqualifiedly bad.

*J. Analyt. Chem., 3, 142–145.

The rate of evolution of ammonia is also an important point in this process, slow evolution showing recent organic matter, and rapid evolution decomposing organic matter, and if the oxygen consuming power is low it is probably animal; if high, of vegetable origin.

In this, as well as all the processes in use in water analyses, Prof. J. W. Mallett has made elaborate experiments, and has given a valuable criticism in the report of the National Board of Health for 1882, and American Chemical Journal, 4, 241, *et seq.* His paper should be studied by all interested in water analysis and the interpretation of the results.

Definite limits have been fixed for the amount of ammonia and albuminoid ammonia allowable in water, but these must be suited to the water of each particular district or better not adhered to at all, as each water must be judged from the relations of the combined determinations and not from any single one. Water containing animal matter is of course to be condemned, but that containing a large amount of vegetable matter should often be also, for although it is not as dangerous, it produces in warm climates intestinal trouble of a serious nature, as was the case with Potomac water after the flood of June, 1889, and the hot sun of July. I must refer also to what has been already said in regard to the relations of color and organic matter.

ORGANIC NITROGEN BY THE KJELDAHL METHOD.

The free and albuminoid ammonia obtained in a water analysis by no means includes all the organic nitrogen of the water, and this has always laid the process open to adverse criticism. Recently Leffman and Beam * and Drown and Martin † have suggested the use of the Kjeldahl process, by means of which there is no difficulty in determining the total nitrogen. Analyses conducted in this way show that this is about double that of the albuminoid ammonia. The only criticism upon this application lies in the trouble in finding pure enough reagents for such delicate work and in avoiding partial inclusion of nitric nitrogen from nitrates in well waters containing considerable nitrates. The experimenters, however, state that no trouble of this kind has been found. A better proposition seems to me to be to determine total nitrogen, organic and inorganic, by the Scovell modified Kjeldahl method, and organic nitrogen by difference. This will, I think, prove a valuable acquisition to the method of water analysis.

OXYGEN REQUIRED TO OXIDIZE ORGANIC MATTER.

Where possible, the method of Tidy—slow oxidation at ordinary temperatures for intervals of several hours—should be carried on, together with the method of Kübel, at the boiling temperature practiced in this laboratory. Under the circumstances, where time does not permit, as with us, the Kübel method is simpler, more expeditious, and affords, with probably a very few exceptions, all the necessary results, since they are principally of value in determining the interpretation of others, and supplies to quite an extent the place of direct determination of organic carbon by the elaborate and tedious combustion process, which can not be practiced where time is an element. The length of time that I have exposed the water to the boiling temperature has been ten minutes from beginning of actual ebullition, and an excess of permanganate has always been maintained, the determination being repeated on a new portion of 500 cubic centimeters if the first addition of permanganate proved insufficient.

NITROGEN AS NITRITES.

Nitrites are easily and definitely determined by the napthylamine and sulphanilic acid test. The only point to which attention must be directed is the necessity of keeping the standard in the dark, and even then frequently renewing it, as it changes rapidly. It resists change longer if sterilized by heating to boiling when made up. The test, Wurster says,‡ is more rapid in presence of acetate of ammonia. Nitrites owe their presence in water generally to the incomplete nitrification of ammonia, or at times to the reduction of nitrates by organic matter. They are very unstable, rapidly changing in one direction or another, and consequently not often present in any amount except in the most filthy waters. As has been said, they are evidence of active putrefactive changes, or at times may show that there is a deficiency of oxygen available for their transformation to nitrates, even after the contamination is ended.

The presence of nitrites in any amount I consider good ground for condemning any water or making a thorough investigation of its surroundings, although traces are

*Amer. Chem. Jour., II, 274-277.
†Jour. anal. Chem., III, 258-269.
‡Berichte, XXII, 1909.

found in many that seem to be passable, and I regard their determination as one of the most important in water analysis. Mallett, in his paper already referred to, has shown that in the waters which he analyzed and which from previous knowledge were classed as wholesome and pernicious, nitrites and nitrates were either wholly absent or present only in traces in the former, and almost universally present in the latter. He also quotes the opinions of many water analysts as to the interpretation to be given to their presence, the large majority of whom agree with him. Ekin, for example, says: "When the amount [of nitrites] exceeds five to six parts per million it points significantly to dangerous pollution; * * * nitrogen as nitrites should be invariably absent from a good water. * * * This view of the importance to be attached to an abnormal quantity of nitrites has been formed in spite of considerable predisposition to a contrary opinion, and has been literally forced upon the writer again and again by the investigation of cases which really leave no doubt in the matter."

Drown says: * * * "It is true that there may be in water matters purely organic which can reduce nitric to nitrous acid, so that while the presence of nitrites in a water makes us feel more or less suspicious of its character, yet they may have an origin which is not associated at all with organic matter. Further investigation in any particular course will generally give us satisfactory evidence of the source of nitrites."

While no doubt for the surroundings in which Ekin worked he was correct, I can not agree that in this region nitrates alone, even as high as 30 parts per million, are condemnatory. Were it so every well in this city would be closed, which, from observation of the results of continued use of waters rich in nitrates, I do not believe to be necessary. Nitrites, however, in more than traces, except in some deep-driven wells, are certainly sufficient to condemn a water, and in this direction I think Drown is too lenient in his remarks. It must be remembered that the absence of nitrites and nitrates does not prove a water harmless, for large amounts of organic matter when present may destroy them. It is necessary that these determinations should be made at once, as changes may go on in a few hours.

NITRATES.

Nitrates are most conveniently determined by the ammonium picrate colorimetrical test of Grandral and Lajoux with the precautions suggested by Leffman and Beam of measuring the sulphuric-carbolic acid and purifying the water with alum when organic matter is present in large amount. The carbazol method of Hooker* may perhaps also be employed in the same way. Nitrates show that there has been past contamination or that nitrates have been derived from soils where the nitric ferment is always present. Nitrates are more readily formed in waters with an alkaline reaction or those from a limestone country containing calcium carbonate. They are abundant in this neighborhood and will be particularly considered in discussing the results of our analyses.

CHLORINE.

Chlorine has been determined in the ordinary volumetric way. The method is not at all exact in comparison with those for the determination of nitrogenous compounds. The errors of the process and conditions to be followed are well described by Alfred Hazen, American Chem. J. 11, 409. Chlorine in surface and spring waters does not exceed a few parts per million under normal conditions. In shallow wells, in artesian boring, and near the sea, the amount may be large. It is a constant constituent of animal filth, and where its excessive presence can not be explained in any other way, it points to animal contamination. Its determination is, therefore, important, when the results are compared with pure waters of the same district, and when considered in relation to the other data pointing to animal contamination.

Phosphates are often determined for similar reasons, but have been neglected by us.

DETERMINATIONS OR PROCESSES NOT IN USE IN THIS LABORATORY.

Some of the processes not in use in this office have been mentioned. They, with several others, hardness, organic carbon and nitrogen, and dissolved oxygen, have been omitted, not because they lack value, but because with the press of work of a general laboratory time has not been available and they have seemed to be not absolutely necessary. In cases of doubtful waters demanding very careful study, their use would undoubtedly prove of assistance in forming an opinion in regard to its character. The same may be said in regard to biological examinations, which should, however, in my opinion, be left to the skilled biologist with his culture room and appropriate surroundings, as such investigations are of worse than no value when improperly conducted.

* Amer. Chem. Jour., 11, 249–258.

GENERAL CONCLUSIONS.

Before entering upon a discussion of the results of our analysis, and in view of what has been already written, I desire to quote the following from Professor Mallett, which concisely states how far we may place dependence on the processes which have been described:

"[General conclusions, with a view to sanitary application, as to the value, separately and collectively, of the different processes of water analysis.]

"(1) It is not possible to decide absolutely upon the wholesome or unwholesomeness of a drinking-water by the mere use of any of the processes examined for the estimation of *organic matter*, or its constituents.

"(2) I would even go farther and say, that in judging the sanitary character of a water, not only must such processes be used in connection with the investigation of evidence of a more general sort as to the source and history of the water, but should even be deemed of secondary importance in weighing the reasons for accepting or rejecting a water not manifestly unfit for drinking on other grounds.

"(3) There are no grounds on which to establish such general 'standards of purity' as have been proposed, looking to exact amounts of organic carbon or nitrogen, 'albuminoid ammonia, oxygen of permanganate' consumed, etc., as permissible or not. Distinctions drawn by the applications are arbitrary and may be misleading.

"(4) Two entirely legitimate directions seem to be open for the useful examination by chemical means of the organic constituents of drinking-water, namely: First, the detection of very gross pollution, such as the contamination of the water of a well by accidental bursting or crushing of soil pipes, extensive leakage of drains, etc.; and, secondly, the periodical examination of a water supply, as of a great city, in order that the normal or usual character of the water having been previously ascertained, any suspicious changes which from time to time may occur shall be promptly detected and their cause investigated.

"(5) In connection with this latter application of water analysis there seems to be no objection to the establishment of local 'standards of purity' for drinking-water, based on sufficiently thorough examination of the water supply in its usual condition.

"(6) With the fact of this investigation before me I am inclined to attach special and very great importance to a careful determination of the nitrites and nitrates in water to be used for drinking."

Agreeing most decidedly with all these conclusions of Professor Mallett I have attempted for this locality to establish some local "standards of purity," or rather of "pass standards" by a series of analysis of the Potomac Aqueduct water under very varied meteorological conditions, of a large proportion of the wells of the District, and of a series of typical wells selected for the purpose, and several springs, which supply hydrants, etc., in different portions of the city.

Analyses of Aqueduct water.

RESULTS IN PARTS PER MILLION.

Serial number.	Date.	Storms of more than 1-inch pressure.	Condition at reservoir.	Rain-fall for the week.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
	1887.										
155	Oct. 18	.....	36	.....	127	.008	.080	1.16	.000	.32	5.5
	1888.										
321	Jan. 4	.....	12	.85	150	.044	.272	3.76	.000	1.00	5.0
346	Jan. 10	.....	7	.31	130	.048	.120	2.08	trace	.80	3.5
358	Jan. 17	.....	8	.79	120	.052	.132	3.12	trace	1.20	5.0
365	Jan. 24	.....	18	.26	.....	.060	.136	2.30	trace	1.40	4.5
374	Jan. 31	.....	36	.63	.....	.028	.124	1.28	trace	1.40	4.0
391	Feb. 7	.....	36	.74	145	.044	.060	1.32	.018	1.60	4.0
405	Feb. 13	.....	5	1.29	140	.060	.202	4.30	trace	1.40	4.0
421	Feb. 20	.....	12	.10	135	.032	.152	1.92	trace	1.52	4.5
447	Feb. 28	25th, 1.07 inches	5	1.28	125	.060	.128	3.80	trace	.72	4.0
469	Mar. 6	.....	6	.44	142	.040	.224	2.22	trace	1.00	4.5
490	Mar. 20	.....	3	1.65	134	.032	.148	2.24	trace	1.92	4.0
521	Mar. 27	12th, 1.60 inches	4	1.82	164	.040	.163	2.12	trace	2.32	4.0
553	Apr. 3	.....	4	.62	147	.008	.232	2.50	trace	2.32	4.5
577	Apr. 10	.....	5	.40	125	.008	.208	2.26	trace	2.32	4.5
592	Apr. 17	.....	7	.97	118	.006	.180	2.50	trace	2.20	4.0
624	Apr. 24	.....	20	.52	98	.008	.072	1.90	trace	1.12	4.5
650	May 1	.....	36	.00	100	.008	.120	1.50	.000	1.12	4.5

Analyses of Aqueduct water—Continued.

Serial number.	Date.	Storms of more than 1-inch pressure.	Condition at reservoir.	Rain-fall for the week.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates	Chlorine.
	1887.										
663	May 8		36	.17	106	.008	.076	.90	.000	.72	4.0
673	May 15		36	1.74	94	.008	.068	.88	.000	.80	4.0
701	May 22		36	.47	78	.004	.048	1.16	trace	1.12	4.5
734	May 29		36	1.67	124	.024	.080	3.40	.000	1.00	5.0
763	June 5		36	.90	90	.004	.120	.76	.000	.60	4.3
790	June 12		36	.04	86	.008	.032	1.42	.000	.72	4.3
816	June 19		36	.62	102	.000	.084	1.36	.000	.60	4.5
836	June 26		36	.69	81	.008	.068	1.38	.000	.60	4.8
852	July 3	28th, 1.64 inches	36	2.00	122	.004	.112	1.32	.000	.60	5.0
872	July 10		36	.48	102	.004	.080	1.30	trace	.72	4.5
880	July 17	10th, 1.83 inches	9	3.37	127	.008	.188	3.12	.000	.60	3.0
912	July 24		15	.07	134	.008	.108	2.48	.000	.60	3.5
937	July 31		36	.53	81	.008	.084	1.56	.000	.32	4.8
968	Aug. 7		36	.31	96	.000	.064	1.38	trace	1.00	4.5
999	Aug. 14	9th, 1.60 inches	36	1.18	90	.000	.072	1.50	.000	.08	4.5
1022	Aug. 21		36	.67	126	.012	.104	1.18	.000	.08	5.0
1057	Aug. 28	22d, 1.18 inches	28	1.13	118	.000	.100	1.66	.000	.32	3.8
1076	Sept. 4		36	.29	108	.000	.060	2.22	trace	.60	3.5
1105	Sept. 11	8th and 9th, 2.06 inches	36	2.62	100	.008	.060	1.36	.015	.60	3.0
1118	Sept. 18	11th and 12th, 1.86 inches	7	3.79	.....	.008	.076	1.90	.000	.60	3.8
1145	Sept. 26	17th and 18th, 4.32 inches	15	.10	106	.008	.060	4.08	.000	1.00	4.0
1164	Oct. 2		30	.10	74	.000	.152	1.80	.000	1.00	4.5
1183	Oct. 9		36	.32	108	.024	.112	1.30	.000	1.00	4.5
1203	Oct. 16		36	.26	69	.004	.060	1.78	.000	1.00	4.5
1233	Oct. 30	27th, 1.30 inches	36	1.93	99	.004	.112	2.06	.000	.72	4.0
1256	Nov. 6		30	trace	97	.000	.192	2.44	.000	1.00	4.0
1271	Nov. 13		36	.36	77	.008	.092	1.98	.000	.72	4.0
1299	Nov. 20	18th and 19th, 2.37 inches	25	2.18	88	.004	.152	2.86	.000	.60	4.0
1326	Nov. 27		17	.36	158	.060	.240	2.22	.000	.60	4.0
1343	Dec. 4		36	.05	77	.008	.060	1.70	.000	1.00	4.0
1392	Dec. 12		36	.06	110	.004	.068	.96	.000	.80	3.5
1416	Dec. 17		36	2.59	.....	.004	.046	1.02	.000	1.50	4.0
1426	Dec. 24	17th and 18th, 3.28 inches	4	.30	.....	.004	.120	2.10	.000	.72	4.0
1431	Dec. 31		8	.32	106	.032	.267	2.16	.000	.80	4.0
	1889.										
1451	Jan. 7	6th, 1.47 inches	12	1.52	109	.008	.140	2.10	.000	1.80	4.0
1480	Jan. 14		4	.46	114	.008	.120	2.14	.000	.80	4.0
1512	Jan. 21		6	1.59	122	.012	.060	1.92	.000	.80	4.0
1534	Feb. 4	21st, 1.16 inches	10	.09	110	.004	.252	1.96	.012	1.50	4.0
1544	Feb. 11		36	.26	99	.000	.112	1.36	trace	.80	4.0
1569	Feb. 18		36	1.43	92	.004	.112	.96	.000	.80	4.0
1591	Feb. 25		4	.18	94	.004	.312	2.50	.000	.80	4.0
1595	Mar. 5	4th, 1.07 inches	3	2.37	132	.008	.188	1.62	.000	.80	3.5
1618	Mar. 11	5th, 1.06 inches	2	.10	192	.048	.404	3.32	trace	.80	3.5
1639	Mar. 18		7	.04	100	.056	.442	2.06	trace	.80	4.5
1658	Mar. 25	19th, 1.04 inches	9	2.14	120	.008	.148	2.04	.000	1.50	4.0
1669	Apr. 2		22	.43	85	.008	.148	1.72	.000	.80	4.0
1676	Apr. 9	7th, 2.05 inches	36	2.27	94	.008	.096	1.10	trace	1.10	4.0
1700	Apr. 15		24	.30	112	.008	.132	1.22	.000	.80	4.5
1731	Apr. 22		36	.87	.....	.008	.104	1.26	.000	.50	4.5
1750	Apr. 29	26th and 27th, 5.98 inches	15	5.32	128	.008	.360	2.78	.000	.80	4.5
1801	May 13		36	.25	86	.004	.152	1.56	.000	1.00	4.5
1860	May 20	15th, 1.36 inches	36	3.59	76	.012	.128	1.26	.000	.50	4.3
1896	May 28	21st, 23d, 26th, 4.18 inches	7	2.83	98	.012	.188	1.30	.000	.50	4.3
1934	June 4	31st, 1st, 7.37 inches	4	4.81	126	.012	.120+	2.88	.300	1.50	4.3
1967	June 11		4	.48	124	.032	.252	2.56	.000	.80	5.8
2021	June 18	15th, 1.17 inches	7	2.12	.....	.004	.212	1.90	.000	.80	5.7
2081	June 25		10	.09	.....	.004	.204	1.86	.000	.80	3.7
2119	July 2	26th, 1.66	14	2.68	100	.004	.172	1.50	.000	.50	3.5
2148	July 9	2d, 1.90 inches	6	.80	116	.008	.244	2.46	.000	1.20	4.5
2175	July 13		14	.....	116	.008	.320	2.22	.000	.60	4.3
2183	July 16		20	.99	..	.004	.244	1.96	.000	.60	3.8
2217	July 22		17	.05	120	.004	.264	1.64	.000	.50	3.7
2248	July 29	27th, 1.53 inches	36	1.59	112	.004	.180	1.56	.000	.80	4.5
2266	Aug. 5	31st, 1st, 3.15 inches	20	3.79	110	.002	.228	2.34	.000	.50	4.5
2289	Aug. 13	7th, 10th, 3.17 inches	18	2.18	.....	.008	.320	2.36	.000	.50	4.5
2344	Aug. 19		26	.01	90	.000	.280	1.82	.005	.50	4.5
2380	Aug. 26		36	.29	96	.004	.192	1.32	.000	.50	4.0
2400	Sept. 2		36	.00	114	.004	.192	1.22	.000	.50	5.0
2409	Sept. 9		36	.46	110	.008	.240	88	.000	.80	4.0
2426	Aug. 16		26	1.10	120	.004	.452	.90	.000	.50	4.0
		Average, 1888	24.5	.....	111	.017	.119	1.98	.000	.97	4.2
		Average, 1889	18.0	.....	110	.009	.214	1.82	.000	.82	4.2
		Two years	22.0	.....	111	.014	.158	1.91	.000	.91	4.2

The preceding analyses represent the character of the Potomac aqueduct water as drawn from the mains at the District building under very varied meteorological conditions. The effect of a long, severe drought with hot weather, is not, however, included.

Averages of the analyses show that the water as a rule is fully as good as that of the largest cities, as can be seen by comparison with the following figures quoted from Leeds, 1881, June:

City.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
Philadelphia	143	.010	.178	4.6	.000	1.51	3.0
New York	118	.027	.267	8.1	.000	1.84	3.5
Brooklyn	60	.007	.081	4.1	.000	2.69	5.5
Jersey City	93	.047	.417	9.5	.000	2.01	2.4
Boston	85	.131	.602	17.7	.000	2.75	3.2
Rochester	100	.113	.228	7.9	.000	1.39	2.0
Cincinnati	162	.114	.238	8.6	.000	1.64	8.1
Washington	115	.060	.268	6.0	.000	1.84	2.7
Washington 1888-'89	111	.014	.158	1.9	.000	.91	4.2

As the analyses given above were made in 1881, none of more recent date being at present available, and since the methods of analyses have been somewhat modified since that time, especially as regards the determination of nitrogen as nitrates, it may not be proper to make a comparison of these cities with Washington, especially as the supply may have changed in character. The general inferences, however, will not be at fault when we say that our present supply is on an average better than these cities at that time.

Considering the variations in the character of the Potomac water, however, presents another aspect.

Extreme determinations in aqueduct water.

Determination.	Highest.	Date.	Lowest.	Date.
Total solids	192.	March 5, 7, 1889	69.	October 2, 1888.
Free ammonia	.060	February 13, 28, 1889	.000	Nine occasions.
Albuminoid ammonia	.452	September 16, 1889	.032	June 12, 1888.
Oxygen consumed	4.30	February 13, 1889	.76	June 5, 1888.
Nitrites	0.15	September 11, 1888	.000	Sixty-one occasions.
Nitrates	2.32	March, 1888	.08	August, 1888.
Chlorine	5.75	June, 1889	3.0	July, September, 1888.

Nitrites were detected in 27 analyses out of 88.

The extreme high determinations, while far beyond what is usually considered desirable in a river water, do not, when combined, exceed the Boston supply in contamination, a supply which owes its high albuminoid ammonia and oxygen consuming power to innocuous organic matter and which is fairly stable in its character. At other times, however, Boston water has not given as extreme figures as those of Leeds. Mallet gives the following determination for September 7, 1881.

Total solids	60.
Free ammonia	.070
Albuminoid ammonia	.255
O. consumed	7.44
N. as nitrites	Trace.
N. as nitrates	Trace.
Chlorine	3.6

And Drown gives results for albuminoid ammonia in June, July, an August, 1888, ranging from .176 to .392. This, however, is a much more highly contaminated water than the Potomac.

Considering the individual analyses it appears that with the river in normal condition the character of the water is good, but that the effect of storm-water, which rapidly makes the river a muddy stream, is to produce an immediate increase in the albuminoid ammonia and oxygen consumed and at times an increase in free ammonia. In the tables all storms of over 1 inch precipitation and the total rain-fall for the week preceding each analysis have been noted and the condition of the water at the effluent gate of the distributing reservoir when observed in a 3-foot tube. It will

be seen that the more turbid the water is, as denoted by the number of inches representing its condition, the more likely the albuminoid ammonia and oxygen consumed are to be high, although this is not always the case.

The highest albuminoid ammonia occurs in the last analysis made this year when the water was quite clear and without a correspondingly high figure for oxygen consumed, and for this reason is a much more dangerous contamination than a similar figure on March 18, 1889, when the oxygen consumed and the free ammonia were both high with traces of nitrites. In the period including May, June, and July, 1888, when there were no excessively severe storms, the albuminoid ammonia remained below .100 most of the time, while, during the past summer when the precipitation has been excessive, it has generally been above .200. In the case of nitrites it is very rare to find more than a trace in the water in the mains, and there seems to be no rule of season or precipitation regulating their presence, while the flood of June 1 increased the chlorids when a diminution would have been expected.

In this connection it is of interest to study the character of the water in the mains in comparison with that in the reservoirs and that flowing into them from the river.

Over 12 inches of rain fell about the 1st of June, 1889, raising the river to a flood and producing great turbidity in the aqueduct water. Under the action of the hot sun of early July the water from the mains, as can be seen from the analyses of that date, was in bad condition. At that time, July 16, the following samples, all very turbid, were collected by the health officer and analyzed by me.

Analyses of special samples of Potomac water after June, 1889, flood and action of sun.

Serial No.	Locality.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
2181	Influent gate to upper reservoir	.072	.148	1.96	Trace	.8	6.0
2180	Upper reservoir	.060	.360	2.14	Trace	2	4.5
2182	Distributing reservoir	.060	.324	2.50	.020	.6	6.3
2183	Laboratory tap	.004	.244	1.96	.000	.6	3.8

Six weeks after the flood the river water gives results which are nearly the average of that usually found in the mains with the exception of high free ammonia and chlorine In the two reservoirs the water was not in good condition, showing high free ammonia, albuminoid ammonia, and oxygen consumed with .020 of nitrogen as nitrites in the distributing reservoirs and over six parts of chlorine, figures far above the extremes in the latter cases. When this water passed through the mains, however, there was a decided change. The free ammonia almost entirely disappeared, the albuminoid ammonia was reduced, nitrites disappeared, and chlorine fell below the average. This shows that the underground journey in iron pipes has a decided effect upon the character of the water. Where the nitrogen and chlorine have disappeared to I will not attempt to say, but the change in the amount of free ammonia explains why it is so seldom found in the tap water in any amount.

I believe, therefore, that the Potomac furnishes a good supply of water for domestic use if only some means were added to our works to prevent the carrying of so much suspended matter into the reservoir where it may decompose under a hot sun, producing not dangerous diseases, but mild intestinal troubles. At least the character of our water is fully equal to that of other large cities, all of which are at times liable to disturbance in their regular quality from causes beyond human control.

SPRING WATERS.

Several springs within the city limits and in the immediate county are sources of a considerable supply. To gain a knowledge of the quality of each, as well as general information in regard to character of spring water passing through the surface soils of the District, the most prominent have been analyzed once a month for over a year.

Monthly analyses of water from the Capitol spring.

Serial No.	Date.	Precipitation previous week.	Condition.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
	1887.									
232	Nov. 15	.....	Clear	104	.040	.028	.18	trace	6.0	12.0
269	Dec. 13	.....	....do	.....	.008	.008	.14	.00	2.0	8.0
	1888.									
316	Jan. 3	.85	....do	305	.034	.040	.20	.00	4.0	7.5
390	Feb. 7	.74	....do	80	.032	.080	.10	.005	3.0	8.5
466	Mar. 6	.44	....do	72	.008	.072	.38	.00	3.0	7.0
550	Apr. 3	.62	....do	58	.008	.072	.30	.00	.3	6.0
647	Apr. 28	.00	....do	90	.032	.060	.34	.00	2.5	8.5
760	June 5	.90	....do	80	.004	.052	.16	.00	.36	8.5
850	July 3	2.00	....do	84	.016	.032	.20	.00	.36	9.5
967	Aug. 7	.31	....do	59	.000	.000	.18	trace	2.4	9.7
1073	Sep. 4	.29	....do	102	.032	.060	.20	.005	1.6	8.5
1162	Oct. 2	.10	....do	60	.004	.020	.16	.003	3.0	7.0
1253	Nov. 6	trace	....do	80	.008	.032	.46	trace	3.0	7.5
1341	Dec. 4	.05	....do	66	.020	.052	.16	.000	2.5	7.0
	1889.									
1430	Jan. 1	.32	....do	42	.004	.048	.16	trace	2.8	7.5
1532	Feb. 4	.69	....do	54	.024	.104	.16	.000	2.8	6.5
1594	Mar. 15	.04	....do	42	.012	.140	.24	.000	1.8	7.5
1667	Apr. 2	.43	....do	68	.012	.060	.16	.000	2.5	8.0
			Average	85	.017	.053	.21	.000	2.4	8.0

Franklin Square spring.

	1887.									
268	Dec. 13	.....	Clear	268	.008	.020	.18	.00	20	47.0
	1888.									
342	Jan. 10	.31	....do	305	.028	.120	.18	trace .	20	55.0
403	Feb. 13	1.29	....do	330	.032	.060	.18	trace .	25	53.5
481	Mar. 13	1.65	....do	320	.012	.072	.24	.00	18	55.5
574	Apr. 10	.40	....do	324	.000	.032	.28	.00	20	54.5
659	May 8	.17	....do	350	.040	.064	.34	.00	18	54.5
671	May 15	1.74	....do	346	.008	.060	.08	.00	25	55.5
787	June 12	.04	....do	304	.004	.032	.28	trace .	16	54.0
871	July 10	.48	....do	.....	.008	.060	.16	.00	30	53.7
996	Aug. 14	1.18	....do	340	.000	.032	.44	.000	15	50.8
1103	Sept. 11	2.62	....do	322	.004	.008	.22	.008	15	53.8
1178	Oct. 9	.32	....do	350	.060	.032	.16	trace .	1.5	52.5
1267	Nov. 13	.38	....do	304	.004	.032	.48	.000	13.6	51.5
1390	Dec. 12	.06	....do	290	.000	.012	.18	trace .	.8	57.5
	1889.									
1447	Jan. 7	1.52	....do	328	.000	.076	.....	trace .	5.8	57.5
1541	Feb. 11	.26	....do	296	.000	.060	.22	trace .	11.2	56.0
1616	Mar. 11	.10	....do	284	.012	.100	.24	.00	5.5	54.5
1674	Apr. 9	2.27	....do	302	.004	.072	.48	trace .	25.0	56.0
			Average	315	.012	.050	.24	trace .	10.8	54.1

City Spring C street and Sixth street and Pennsylvania avenue.

	1887.									
201	Nov. 1	.....	Clear	356	.044	.048	.36	trace.	22.0	66.0
276	Dec. 18	.....	....do	250	.028	.056	.26	trace.	10.0	46.0
	1888.									
317	Jan. 3	.85	....do	370	.032	.132	.30	.00	18.0	61.5
388	Feb. 7	.74	....do	355	.008	.128	.28	.005	18.0	59.5
467	Mar. 6	.44	....do	335	.004	.060	.24	.00	15.0	60.0
551	Apr. 3	.62	....do	355	.008	.072	.36	trace.	17.0	61.5
648	Apr. 28	.00	....do	348	.012	.072	.42	.00	15.0	62.5
761	June 5	.90	....do	364	.000	.060	.18	.00	9.0	65.3
849	July 3	2.00	....do	394	.008	.068	.24	.00	11.0	66.0
966	Aug. 7	.31	....do	330	.000	.024	.30	trace.	9.0	75.2
1073	Sept. 4	.29	....do	400	.040	.028	.30	.018	.6	63.0
1161	Oct. 2	.10	....do	340	.008	.032	.32	trace.	11.6	60.0
1254	Nov. 6	trace.	....do	358	.012	.092	.52	.000	11.0	59.5
1340	Dec. 4	.05	....do	296	.008	.084	.22	.000	5.6	64.5
	1889.									
1428	Jan. 1	.32	....do	324	.004	.108	.30	trace.	18.0	58.0
1531	Feb. 4	.09	....do	306	.000	.092	.30	.000	15.0	59.0
1593	Mar. 15	.04	....do	364	.252	.192	.96	trace.	13.0	63.0
1668	Apr. 2	.43	....do	324	.004	.088	.36	.000	15.0	60.5
			Average	343	.026	.080	.34	trace.	13.0	61.7

P street spring.

Serial No.	Date.	Precipitation previous week.	Condition.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorines.
	1888.									
934	July 31	.53	Cloudy	198	.048	.108	1.52	.038	9.0	37.3
1104	Sept. 11	2.62	Sl. cloudy	188	.032	.132	.78	.035	11.6	28.8
1180	Oct. 9	.32	Cloudy	168	.012	.032	.76	trace.	9.0	29.0
1266	Nov. 13	.38	Sl. cloudy	170	.024	.120	.86	trace.	7.0	33.0
1391	Dec. 12	.66	Cloudy	184	.008	.080	.56	.032	6.5	27.5
	1889.									
1448	Jan. 7	1.52	....do	200	.008	.240	2.56	.005	5.5	27.5
1540	Feb. 11	.26	....do	162	.000	.136	.36	.012	5.6	27.5
1673	Mar. 11	.10	Cl. F. tinge	164	.004	.172	.44	trace.	6.0	25.6
1673	Apr. 9	2.27	Sl. Cloudy	166	.004	.112	.22	.013	15.0	27.0
			Average	178	.016	.126	.87	.015	8.3	29.2

The average results for each of these springs are here compared:

Springs.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
Capitol spring	85	.017	.053	.21	.000	2.4	8.0
Franklin Square spring	315	.012	.052	.24	trace.	10.8	54.1
City spring	343	.026	.080	.34	trace.	13.0	61.7
P street spring	178	.016	.126	.87	.015	8.3	29.2

The Capitol spring is situated without the city limits, in the bed of what has become the new reservoir, near the Soldiers' Home, and has been, I believe, properly protected during the recent excavations. It should not from its situation be liable to any pollution. The water is conveyed to the Capitol.

The Franklin Square spring is in the center of Franklin Square, and is well removed from immediate sources of pollution. The water is conveyed in numerous directions and supplies many hydrants on the streets and several buildings.

The City spring is situated on C street, beneath the building on the north side, between Four-and-a-Half and Sixth, now occupied by C. J. Bell as a photolithographic establishment. It is ceiled up under the flooring, and the water is conveyed by pipes to many neighboring stables and hotels and to a hydrant on the southwest corner of Sixth street and Pennsylvania avenue. Its flow is large. It is liable at any time to serious contamination from a soil-pipe from an adjacent water-closet.

The P street spring is found on P street, in a gravel bank, just off the sidewalk, between Twenty-second and Twenty-third streets, on the north side. It is protected by a brick vault, but is liable to contamination from surface drainage.

As must be expected from its situation, the water from the Capitol spring is the best. Were it available directly from the spring, the results of analysis would probably be better than after its passage through pipes to the Capitol. As collected, it seems to be of fairly good quality, and much better than the other springs, from closely settled neighborhoods. It furnishes a good standard of what should be expected of the uncontaminated spring water of the surrounding country. For comparison, analyses of a deep well, over 100 feet, at the corner of Woodley lane and the Tennallytown road, is of value.

Well on Woodley lane.

Total solids	174.
Free ammonia	.000
Albuminoid ammonia	.020
Oxygen consumed	.22
Nitrogen as nitrites	.000
Nitrogen as nitrates	0.0
Chlorine	4.0

This well extends over 100 feet into the Columbia gravels, and is an excellent sample of the fact that deep waters are, as a rule, uncontaminated.

When the neighborhood of a spring is thickly settled, even with an intervening distance such as is found on Franklin Square, the result is very apparent. The solids, nitrates, and chlorine increase at once to high figures and traces of nitrites are found. The organic constituents do not, however, increase in a corresponding way. The contamination consists of the fully-oxidized products of the pollution of the soil with filth, probably without damaging at all the quality or safety of the water for use.

When this pollution of the soil becomes greater, owing to immediate habitation of surroundings, the contamination becomes more apparent, as in the C street spring, but even here it is of such a nature as not to furnish sufficient grounds for condemnation as far as the chemical evidence is concerned, although the environmental evidence compels us to look upon the water with great suspicion.

At the P street spring there is evidently surface contamination, as shown by the higher figures for albuminoid ammonia, oxygen consumed, and nitrites. From its surroundings there seems to be no reason to suspect any other source.

These springs furnish an excellent basis for beginning the study of the shallow wells of the Districts of which there are over 300.

WELL WATERS.

In the beginning of my duties as water analyst for the District, it was very evident that, for the purpose of forming a proper opinion in regard to the quality of the well waters submitted to me, a local standard of purity was necessary. I found no record to deduce anything from, and feeling the importance of keeping open as many wells as possible for the benefit of the poorer classes who can not in the summer months afford to buy ice, and find the aqueduct water in the mains at a temperature often above 80° Fahrenheit, I at once undertook an examination, at intervals, of a series of wells which should furnish the desired information. The results of the analyses are here presented:

Well, Tenth and K Streets, Northwest.

Serial No.	Date.	Condition.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen required.	Nitrites; nitrogen.	Nitrates; nitrogen.	Chlorine.	Precipitation in previous week.
	1887.									
153	Oct. 18	Clear	310	.004	.040	.26	none.	20	55.5	.....
285	Dec. 20	....do	370	.016	.080	.28	none.	21	57.5	.....
	1888.									
356	Jan. 17	....do	350	.028	.064	1.08	none.	25	50.0	.79
419	Feb. 21	....do	350	.024	.072	.88	.002	25	50.5	.10
486	Mar. 20	....do	366	.012	.072	.90	trace.	18	49.5	.01
590	Apr. 17	....do	336	.008	.072	.66	trace.	18	47.0	.97
700	May 22	....do	310	.008	.060	.22	trace.	18	46.5	.47
814	June 19	....do	360	.008	.032	.38	trace.	18	52.3	.62
878	July 17	....do	372	.032	.076	.28	trace.	18	52.8	3.37
1019	Aug. 21	Slightly turbid	330	.008	.060	.64	trace.	25	53.8	.67
1116	Sept. 18	Clear	368	.008	.060	.94	.035	20	54.8	3.79
1202	Oct. 16	....do	415	.028	.048	.56	.005	28	46.3	.26
1297	Nov. 22	....do	336	.008	.136	1.52	trace.	23	52.5	2.18
1415	Dec. 17	....do	406	.034	.056	.76	.015	18	57.0	2.89
	1889.									
1479	Jan. 14	....do	363	.008	.120	.74	trace.	12	53.0	.48
		Average	356	.016	.069	.67	.004	20.5	51.5	

Well on Wilson street.

Serial No.	Date.	Weather.	Condition.	Solids.	Free NH_3.	Albuminoid NH_3.	Oxygen kübel.	N. 25 nitrites.	N. 31 nitrates.	Chlorides.
	1887.									
301	Dec. 27	.....	Clear	110	.012	.080	.80	.014	2.0	24.0
373	Jan. 31	.63	... do	.....	.072	.232	.30	.025	4.0	29.0
445	Feb. 28	1.20	... do	165	.024	.032	.22	.025	3.0	21.2
520	Mar. 27	1.82	... do	136	.032	.020	.24	.018	1.0	26.5
622	Apr. 24	.52	... do	122	.060	.012	.34	.015	2.0	25.0
733	May 29	1.67	....do	126	.008	.024	.18	.018	2.0	26.0
832	June 26	.69	....do	124	.004	.036	.36	.005	5.0	26.8
910	July 24	.07	... do	134	.008	.032	.20	trace.	15.0	28.5
1055	Aug. 28	1.13	....do	122	.008	.040	.28	trace.	2.0	32.0
1140	Sept. 26	.10	....do	124	.004	.008	.16	trace.	3.0	29.5
1231	Oct. 30	1.93	....do	120	.024	.020	.70	.000	6.0	27.5
1323	Nov. 27	.36	....do	116	.012	.048	.48	.010	3.4	27.5
1424	Dec. 24	.30	....do	.....	.020	.024	.64	.000	5.0	27.5
1510	Jan. 21	1.39	....do	105	.020	.060	.26	.015	5.0	27.5
1588	Feb. 18	1.43	....do	146	.024	.092	.26	.030	3.0	27.5
1656	Mar. 25	2.14	....do	114	.008	.112	.30	.012	3.0	28.0
			Average	126	.021	.055	.36	.012	4.4	27.1

* With blue tinge.

Well at Twelfth and O streets, northwest.

	1887.									
288	Dec. 20	.....	Clear*	.....	.036	.026	.46	.010	32.0	105.0
	1888.									
355	Jan. 17	.79	....do	450	.048	.068	.32	.035	35.0	94.0
420	Feb. 20	.10	....do	515	.040	.060	.32	.045	30.0	94.5
583	Mar. 13	1.65	....do	470	.108	.032	.40	.055	25.0	88.0
589	Apr. 10	.40	....do	428	.060	.060	.46	.053	25.0	81.0
699	May 22	.47	....do	386	.060	.064	.30	.030	28.0	72.3
813	June 19	.62	... do	260	.012	.060	.28	.017	18.0	91.8
877	July 17	3.37	....do	448	.020	.160	.36	trace.	25.0	91.3
1021	Aug. 21	.07	....do	437	.032	.108	.30	trace.	18.0	98.8
1138	Sept. 26	.10	....do	480	.060	.032	.....	.035	25.0	99.9
1201	Oct. 16	.26	....do	348	.008	.100	.78	trace.	25.0	92.5
1296	Nov. 20	2.18	....do	414	.280	.148	1.12	.032	25.0	84.0
1413	Dec. 17	2.59	....do	466	.076	.082	.48	.025	38.0	84.5
	1889.									
1478	Jan. 14	.46	....do	442	.064	.080	.36	.015	15.0	84.0
	Average			396	.065	.077	.46	.025	26.0	90.1

* With blue tinge.

Well at Seventeenth and K streets, northwest.

Serial No.	Date.	Precipitation in previous week.	Condition.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen by Kubel.	Nitrite.	Nitrates.	Chlorine.
	1887.									
46	Sept. 15	.....	Clear	317	.005	.030	.80	.....	15.0	49.0
267	Dec. 13	.....	do	255	.008	.023	.36	.020	24.0	59.5
	1888.									
343	Jan. 11	.31	do	255	.080	.080	.48	.050	20.0	47.0
401	Feb. 13	1.29	do	265	.144	.076	.64	.040	25.0	46.5
484	Mar. 20	.01	do	288	.172	.060	.58	.130	18.0	45.5
575	Apr. 10	.40	do	285	.128	.040	.58	.130	18.0	47.5
670	May 15	1.74	do	252	.064	.076	.30	.060	15.0	43.0
786	June 12	.04	do	254	.072	.040	.38	.075	18.0	43.8
870	July 10	.48	do	242	.072	.032	.16	.125	25.0	39.75
995	Aug. 14	1.18	do	250	.060	.032	.36	.050	18.0	46.0
1102	Sept. 11	2.62	do	232	.100	.032	.28	.125	18.0	43.0
1177	Oct. 9	.32	do	250	.060	.032	.52	.015	25.0	42.5
1265	Nov 13	.38	do	248	.060	.052	.68	.025	15.0	46 0
	1889.									
1459	Jan. 7	1.52	do	218	.060	.096	.68	.018	13.0	43.5
1542	Feb. 11	.26	do	236	.100	.060	.50	.025	12.0	44.5
1614	Mar. 11	.10	do	288	.140	.173	.74	.026	15.0	44.5
1675	Apr. 9	2.27	do	308	.020	.048	.50	.018	18.0	44.5
	Average			261	.079	.058	.50	.058	18.3	45.6

Well on North Capitol street between B and C streets.

	1887.									
262	Dec. 5	.....	Clear	020	.020	.080	.90	.001	5.	27.5
302	Dec. 27	.....	do	175	.004	.064	1.54	.064	5.6	19.5
	1888.									
364	Jan. 24	.26	do	180	.358	.112	3.44	.080	4.0	19.5
446	Feb. 28	1.20	do	190	.164	.060	1.40	.140	5.0	17.5
519	Mar. 27	1.82	do	184	.220	.060	1.28	.380	2.9	19.0
621	Apr. 24	.52	do	185	.212	.072	1.08	.056	6.0	19.5
732	May 29	1.67	do	184	.136	.060	.84	.004	3.0	22.3
833	June 26	.69	do	190	.064	.076	.50	.068	8.0	21.8
911	July 24	.07	do	208	.064	.024	.44	.125	6.0	24.8
1056	Aug. 28	1.13	Clear, blue tinge	172	.044	.012	.32	.015	8.0	27.3
1139	Sept. 26	.10	do	166	.040	.020	.34	.025	8.0	24.5
1232	Oct. 30	1.93	do	110	.216	.080	1.48	.018	6.0	17.5
1325	Nov. 27	.36	Light, turbid, yellow	126	.140	.176	.90	.035	6.0	19.5
	1889.									
1425	Dec. 24	.30	Clear, blue tinge	.....	.200	.068	1.50	.015	6.0	19.0
1509	Jan. 21	1.39	Clear, yellow tinge	170	.500	.100	.70	.015	5.0	19.0
1590	Feb. 18	1.43	Clear	162	.100	.140	.78	.015	8.0	19.5
1655	Mar. 25	2.14	Clear	164	.112	.148	.50	.015	5.0	23.5
	Average			152	.152	.1080	1.06	.063	5.7	21.3

Well on Seventh street road, one-fourth mile out.

	1887.									
126	Oct. 10	.....	Clear	370	.088*	.136*	.68	.003	14.0	111.0
	1888.									
372	Jan. 31	.63	do	.....	.012	.056	1.84	.015	30.0	162.5
444	Feb. 28	1.20	do	590	.000	.224	.90	.006	58.0	127.0
518	Mar. 27	1.82	do	520	.036	.120	1.60	.058	35.0	110.0
620	Apr. 24	.52	do	499	.008	.192	1.02	.035	25.0	108.5
731	May 29	1.67	do	504	.200	.192*	1.44	.008	26.0	124.8
831	June 26	.69	do	502	.008	.132	.82	.015	25.0	110.8
909	July 24	.07	do	456	.032	.176	1.38	.015	18.0	97.8
1054	Aug. 28	1.13	Clear, blue tinge	474	.020	.240	1.22	.015	5.0	108.8
1137	Sept. 26	.10	Turbid, yellow	272	.148	.192	2.12	.015	15.0	110.5
1230	Oct. 30	1.93	do	304	.200	.360	3.80	.000	9.0	56.0
1324	Nov. 27	.36	do	284	.360	.172	1.84	.005	13.0	59.5
1423	Dec. 24	.30	do	.....	.392	.148	3.82	trace	15.0	57.5
	1889.									
1511	Jan. 21	1.39	Clear	262	.500	.300	1.96	.005	8.0	48.5
1589	Feb. 18	1.43	Milky	258	.668	.400	2.38	.002	5.0	47.5
1657	Mar. 25	2.14	Turbid, yellow	308	.680	.505	4.88	.035	8.0	44.5
1698	Apr. 15	.30	Slightly turbid	306	.160	.240	2.34	.005	15.0	38.0
	Average			348	.207	.223	2.90	.014	18.4	89.6

Well at Fifth and I streets.

Serial No.	Date.	Precipitation in previous week.	Condition.	Solids.	Free NH_3	Alb. NH_3	Oxygen Kübel.	N. as nitrites	N. as nitrates.	Chlorine.
	1887.									
92	Oct. 3	.....	Clear	480	.024	.080	1.36	.020	30.0	111.0
287	Dec. 20	.....	....do	.....	.020	.088	2.24	.050	12 0	95.0
	1888.									
344	Jan. 10	.31	....do	405	.040	.108	2.34	.025	10.0	92.5
402	Feb. 14	1.29	....do	420	.012	.144	1.82	.050	10.0	91.0
485	Mar. 20	.10	....do	440	.020	.072	1.88	.025	10.0	94.5
576	Apr. 10	.40	....do	420	.060	.100	.72	.028	15.0	96.0
661	May 8	.17	....do	446	.032	.072	1.78	.050	15.0	98.5
672	May 15	1.74	....do	474	.012	.120	1.60	.050	8.0	100.5
788	June 12	.04	....do	394	.008	.108	1.50	.068	15.0	109.3
867	July 10	.48	....do	520	.032	.104	1.32	.015	25.0	113.0
994	Aug. 14	1.18	Cloudy	490	.100	.048	1.32	.075	8.0	97.0
1101	Sept. 11	2.62	Clear	422	.576	.048	1.54	.390	18.0	91.0
1179	Oct. 9	.32	....do	428	.828	.040	1.30	.015	15.0	91.0
1268	Nov. 13	.38	Slighly turbid	418	1.360	.300	6.44	.075	8.0	89.0
*1388	Dec. 12	.06	....do	442	.332	.060	.64	.275	12.0	87.5
	1889.									
1449	Jan. 7	1.52	Clear	442	.912	.252	2.18	.175	15.0	89.0
1543	Feb. 11	.26	Turbid	414	1.320	.200	3.56	.190	15.0	87.5
*1728	Apr. 22	.87	Slightly turbid	426	1.460	.108	2.38	.035	15.0	93.8
2216	July 2	2.68	Slight odor; yellow, turbid.	416	1.480	.092	1.12	.192	8.0	94.8
	Average			439	.454	.113	1.95	.095	13.8	95.9

Well at Maryland avenue and Four-and-a-half street.

	1887.									
185	Oct. 24	.....	.....	545	.040	.136	.56	.002	20.0	148.0
261	Dec. 2	.....	Turbid	.....	.024	.092	.78	.002	25.0	161.5
	1888.									
318	Jan. 3	.85	.....	580	.056	.108	1.46	.200	20.0	183.5
389	Feb. 7	.74	Clear	610	.072	.060	.74	.075	35.0	157.0
468	Mar. 6	.44	....do	700	.200	.040	1.18	.325	25.0	166.0
552	Apr. 3	.62	....do	600	.080	.032	.48	.140	48.0	189.0
649	Apr. 28	.00	....do	578	.116	.104	.24	.032	18 0	182.5
762	June 5	.90	....do	600	.060	.032	.30	2.000	25.0	174.5
851	July 3	2.00	....do	604	.040	.076	.36	.045	25.0	155.0
965	July 31	.53	....do	462	.000	.060	.32	.038	15.0	150.5
1074	Sept. 4	.29	....do	466	.076	.032	.78	.035	15.0	132.5
1163	Oct. 2	.10	....do	435	.100	.060	.50	.025	28.0	137.5
1255	Nov. 6	Trace.	....do	448	.240	.040	.88	.075	25.0	139.5
1342	Dec. 4	.05	....do	552	.800	.072	.76	.075	15.0	196.0
1429	Dec. 31	.32	....do	514	.060	.140	.50	.035	15.0	154.0
	1889.									
1533	Feb. 4	.09	....do	532	.104	.120	.44	.038	18.0	160.5
1665	Apr. 2	.43	....do	544	.472	.288	.76	.175	18 0	169.5
	Average			548	.149	.088	.65	.195	23.0	162.2

Well on Tenth street between N and O northwest.

	1887.									
286	Dec. 20	.....	Clear	275	.720	.132	3.00	.375	11.0	53.0
	1880.									
357	Jan. 17	.79	....do	240	.088	.056	.56	.045	6.0	49.5
487	Mar. 13	1.65	....do	240	.184	.300	2.28	.090	28.0	42.5
591	Apr. 10	.40	....do	242	.060	.032	.80	.075	28.0	46.0
698	May 22	.47	....do	274	.060	.072	.46	.013	15.0	49.8
815	June 19	.62	Turbid	124	.008	.120	3.02	.000	4.0	6.8
879	July 17	3.37	....do	178	.008	.216	3.78	.000	.6	3.8
1020	Aug. 21	†.67	Turbid, yellow tinge.	132	.008	.084	5.98	trace.	5.0	6.3
1117	Sept. 18	3.79	....do	143	.012	.108	2.00	trace.	15.0	6.7
1298	Nov. 22	2.18	....do	128	.008	.152	2.06	.000	trace.	4.5
1414	Dec. 17	2.59	....do	132	.006	.100	1.50	trace.	6.0	4.5
	1889.									
1477	Jan. 14	.46	....do	176	.004	.292	2.30	.028	71.2	4.5
	Average first period			254	.222	.118	1.42	.120	17.6	48.1
	Average second period			145	.008	.154	2.95	.004	4.5	5.3

*Cleaned. †Shriven.

Sixth and Massachusetts avenue northwest.

91	1887. Oct. 3	.....	Turbid, yellow.....	500	.022	.018	.54	.000	13 0	34. 0
873	1888. June 26	.69	....do	907	.332	.036	1.24	.240	18.0	24. 8
970	Aug. 7	.31	... do	932	.322	.064	.92	.000	3.0	268. 8
1023	Aug. 21	.67	Clear, yellow	792	.184	.060	.84	.048	15.0	94. 2

The preceding analyses were of wells that were selected at the time with the idea that they were fairly typical of the average, but they have not proved entirely so. Some which were thought to represent good wells soon proved to be far from above suspicion, and, in general, great variations were found from month to month. The average for each well is here given.

Locality.	Total solid.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
Tenth and K street northwest	256	.016	.069	.67	.004	20. 5	51. 5
Wilson street.....	126	.021	.055	.36	.012	4. 4	27. 1
Twelfth and O streets northwest	396	.065	.077	.46	.025	26. 0	90. 1
Seventeenth and K streets northwest	261	.079	.058	.50	.058	18. 3	45. 6
North Capitol between B and C streets	152	.152	.080	1. 06	.063	5. 7	21. 3
Seventh street road, one-fourth mile out	348	.207	.223	2. 00	.014	18. 4	89. 6
Fifth and I streets northwest	439	.454	.113	1. 95	.095	13. 8	95. 9
Maryland avenue and Four-and-a-half street southwest..	548	.149	.088	.65	.195	23. 0	162. 2
Tenth street between N and O northwest, first	254	.222	.118	1. 42	.120	17. 6	48. 1
Tenth street between N and O northwest, second.....	145	.008	.154	2. 95	.004	4. 5	5. 3

None of these wells are free from nitrites and consequently none are entirely above suspicion, according to the opinions of the best authorities. That at Tenth and K has so small an amount that it may be regarded as a fair well and good for the center of a city. The environmental evidence eventually condemned the wells at Fifth and I streets and Maryland avenue, and Four-and-a-half and Seventh street road. The first was contaminated by a large growth of roots into the well, which supplied a large amount of, perhaps, harmless organic matter which gave rise to very high amounts of free ammonia and nitrites, and a yellow color. It was filled up. This water is very typical of the peculiar result of vegetable contamination and serves as a good standard example. When first examined it was suspicious but not seriously contaminated, but toward the end of the season of growth in the summer of 1888 roots had reached the water in such numbers as to produce the rapid rise in free ammonia, culminating on November 13 in such excessive figures that the well was cleaned as thoroughly as possible with the result of reducing these figures enormously, but not giving a clean well. Subsequently the contamination increased regularly and the well was abandoned. At the times of the greatest organic contamination the nitrates reached their lowest point, probably being destroyed by it, and illustrating well this peculiarity. The solids at times were also below the average.

The well at Maryland avenue and Four-and-a-half street, after a long discussion and the assertion that nothing was the matter, was eventually found to be liable to contamination from two drain pipes. This appears, from the great variations in the results of the analyses, to have been very irregular, varying from almost no nitrites to 2.000 parts and showing unusual changes in chlorine and free ammonia. All these results are most suspicious and point to sewage contamination. There has been an attempt made to prevent further pollution, but the well has not been examined since being given a chance to clean itself.

The well on the Seventh street road was found to suffer from surface contamination, storm water with its accumulated filth from the street reaching the well. With this form of pollution nitrites do not reach a high figure while free ammonia and oxygen consumed do, differing from the Fifth and I street well where the nitrifying ferment is evidently brought into the well with the roots. None of the remaining wells have been in any way condemned by the environmental evidence. That on Wilson street is quite a distance outside the boundary, in a sparsely populated region. It is only suspicious from the presence at times of nitrites, which in this case seem to me to be insufficient to condemn the water. Their presence in this case points to the fact that perhaps we should not always reject a water on the basis of there being nitrites present when the remaining determinations are in no way suspicious.

The well at Seventeenth and K streets is used by an enormous number of people, has been kept in the most excellent condition, has no immediate sources of pollution save a good brick sewer 25 feet distant, and has never been the occasion of the least suspicion, and yet it averages .058 part of nitrites. It must however be classed as a suspicious well upon the chemical evidence, the remaining determinations, such as free ammonia, not being low and considerable variation appearing from month to month. It would be a great hardship to close this well, and at present I should hesitate to do so from a general consideration of the facts without special regard for the chemical analysis, and this well is typical of dozens of similar ones in the city showing the great difficulty, when the chemical results are not considered alone, of arriving at a satisfactory conclusion. I do not suppose that one chemist in ten would hesitate to condemn this water from a chemical point of view, but I should prefer to regard it as suspicious only. Were the oxygen consumed high or the chlorine and nitrates higher a different aspect might be put upon the case.

The other wells may be considered in much the same light as those already mentioned. That on North Capitol street evidently suffers from surface contamination, but is low in nitrates and chlorides for a city well, and so is probably free from sewage. That at Tenth street, between N and O presents a most anomalous state of affairs, since in June, 1888, it entirely changed its character, due, I suspect, to aqueduct water reaching the well; at least this would produce about the result found. At Sixth and Massachusetts avenue a well was filled up because it was most variable in composition and consequently most suspicious. At all times it was bad and also beyond explanation.

From these analyses I failed to establish as much of a local standard of purity as I wished, but they have served to assist in classifying the results of the many single analyses of numerous wells so as to derive from them the desired result. I have been led to believe from them that many waters may be harmless for drinking purposes which contain small amounts of nitrites, if they do not contain large amounts of *chlorine* and *nitrates* at the same time, but that nevertheless these waters are still suspicious and liable at any time to be so much further polluted that the oxidation may not be sufficiently complete to render them harmless, as Professor Drown says:

"If the process of oxidation is complete we have nothing to fear, but in the case of any water we can not, from an analysis made to-day, which shows no unchanged organic matter remaining, feel sure that perhaps to-morrow the change may be equally great."

From the experience derived from the preceding wells the analyses of all others have been tabulated, dividing them into passable wells and questionable and condemned wells. As passable wells have been classed, those which carry no more nitrates than the best of the previously analysed waters Tenth and K streets, or .004 parts per million, unless they are condemned by some of the other determinations. The remaining analyses have been placed in the second class. In each class the waters have been grouped according to the different sections of the city.

Passable wells.

Serial No.	Locality.	Date.	Condition.	Color.	Total solids.	Free ammonia.	Albuminoid ammonia	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
	COUNTY.										
118	One fourth mile out Bladensburgh road.	Oct. 10	Turbid	Ferruginous.	73	.040	.040	.90	Trace	Trace	16.0
120	Glenwood road				85	.020	.036	.16	.001	6.0	15.5
154	Brentwood school				104	.008	.034	.32	.000	1.0	17.5
190	Elverson's, Georgetown.				99	.100	.104	1.38	.000	4.0	10.0
1144	Industrial H. School	Aug. 26	Clear		88	.004	.012	.24	.000	5.6	17.5
1535	do	Dec. 31	do	Yellowtinge	20	.024	.100	1.18	.000	.0	4.5
1734	do	Apr. 24	do		176	.000	.124	1.96	.000	Trace	47.5
1615	Thirty-fifth and new cut road.	Mar. 11	do		286	.048	.100	.22	.000	16.0	46.0
2184	Columbia Heights	July 16	do		142	Trace.	.020	.76	.000	1.0	26.3
2222	Woodley lane	July 22		Slightly opal.	174	.000	.020	.22	.000	0.0	4.0
2228	Monroe street, Anacostia.	Aug. 13	do		274	.000	.064	.38	Trace	15.0	44.5
2342	Hillsdale	Aug. 19	do	Light straw	68	.000	.140	.32	.000	Trace	13.0
	Average				133	.020	.066	.67	.000	4.1	18.5

Passable wells—Continued.

Serial No.	Locality.	Date.	Condition.	Color.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
	NORTHEAST SECTION.										
319	Delaware avenue and C street.	.....	Clear	.....	200	.048	.080	.72	.000	20.0	19.0
482	Fifth and A streets....	Mar. 13	.....	.....	330	.008	.168	2.36	Trace	28.0	44.5
	Average	.....	.....	.....	265	.028	.124	1.54	Trace	24.0	31.8
	SOUTHWEST SECTION.										
1059	I between Four-and-a-half and Sixth streets.	Aug. 28	Turbid ...	Yellow ...	566	.008	.048	.88	.000	28.0	111.0
	SOUTHEAST SECTION.										
830	Sixth and B streets....	June 26	Clear	.....	266	.004	.024	.28	.000	15.0	83.5
997	Seventeenth and Massachusetts avenue.	Aug. 14	Cloudy ...	Yellow ...	174	.000	.008	1.82	.000	6.0	26.3
1568	Third and South Carolina avenue.	Feb. 18	Turbid....	....do	278	.060	.148	.90	.000	18.0	52.5
1859	Third and Pennsylvania avenue.	May 20	Clear	.....	246	.020	.121	.90	.000	18.0	74.0
2246	Fourth and E streets .	July 29	....do	.....	300	.008	.092	.50	.000	15.0	92.0
2287	Fourth and East Capitol.	Aug. 13	....do	.....	190	.000	.032	.32	.000	.8	43.0
	Average	.....	.....	.....	242	.015	.071	.79	.000	12.1	60.2
	NORTHWEST SECTION.										
49	Second and B*	Sept. 13	Clear	Colorless .	385	.005	.005	.29	.000	16.0	78.0
50	Q, between Thirteenth and Fourteenth.	Sept. 13	.....	.....	....	.005	.045	.70	Trace	20.0	30.0
62	St. John's College.....	Sept. 21	....do	....do	209	.040	.100	.35	.003	11.0	38.0
82	New Jersey avenue, between M and N streets.	Sept. 28	....do	....do	276	.005	.010	.52	.000	16.0	42.0
184	Fifth and L streets ...	.....	.....	.....	275	.028	.040	.74	.003	.0	103.0
186	Twelfth and Q streets	.....	.....	.....	302	.008	.044	.88	.001	.5	110.0
399	E street and Virginia avenue.	Feb. 13	....do	.....	265	.060	.040	.44	Trace	15.0	51.5
669	Twelfth street and Massachusetts avenue.	May 15	....do	.....	292	.012	.120	.38	Trace	18 0	52.5
829	Seventh street at Eastern Market.	June 26	....do	.....	460	.008	.036	1.64	Trace	38.0	66.5
868	Sixth and H streets...	July 11	....do	.....	588	.004	.060	.26	.000	28.0	136.5
1098	Tenth and S streets...	Sept. 11	Turbid	....do	198	.008	.060	.48	Trace	3.0	26.0
2264	Tenth and S streets...	Apr. 5	Clear	Milky	196	.008	.088	.12	.000	6.0	27.5
1287	Rear of No. 2352 Sixth.	Nov. 20	Slightly turbid.	Straw	118	.000	.048	1.30	Trace	8.0	17.5
1427	Twelfth and New York avenue.	Dec. 31	Clear.	Yellow ...	282	.008	.096	.30	Trace	25.0	56.0
2030	Caroline street.....	June 25	....do	Blue	106	.004	.060	.34	Trace	4.0	13.8
2146	Third and R	July 9	....do	....do	74	.008	.108	.90	.000	.8	9.3
2265	Four-and-a-half, between B and C.	Aug. 5	Cloudy ...	.....	368	.004	.100	1.04	.000	7.0	51.5
2379	New Jersey avenue and K street.	Aug. 26	Clear.	.....	324	.000	.100	.18	Trace	65.0	69.5
	Average	.....	.....	.....	278	.012	.064	.60	Trace	12.7	54.4

* Probably supplied from a spring pipe.

Questionable and condemned wells.

Serial No.	Locality.	Date.	Condition.	Color.	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
	COUNTY.										
		1887.									
119	Caton avenue	Oct. 10	Clear		95	.120	.136	5.10	.018	2.0	19.0
123	Milk House Ford	Oct. 10	....do		222	.040	.068	.60	.025	13.0	50.5
124	Brightwood	Oct. 10	....do		164	.032	.096	1.32	.030	6.0	20.5
200	Brightwood, cleaned	Oct. 10	....do		86	.020	.060	.32	.....	8.0	19.0
125	Seventh street, one-quarter mile out	Oct. 10	....do		145	.032	.100	.36	.010	8.0	26.0
		1888.									
908	Seventh street, No. 2700	July 24	Milky; strong odor		174	.004	.068	2.08	.....	.....	7.3
1363	T street, Hillsdale	Dec. 9	Very turbid	Red	202	.360	.208	5.10	.....	.....	37.5
1386	Brightwood	Dec. 12	Clear	Blue tinge	140	.....	.045	.28	.012	6.0	22.5
		1889.									
1766	Roanoke street, Columbia Heights	May 13	....do		80	.032	.152	.48	.015	3.0	13.5
2144	Warner farm	July 9	....do		116	.004	.124	.58	.020	2.0	33.0
2285	2454 Seventh street	Aug. 13	....do		458	.060	.212	1.16	.300	18.0	64.0
2288	Harrison street, Anacostia	Aug. 13	....do		92	.012	.100	.40	.032	3.0	19.0
	Average	.....	.....	.....	165	.060	.123	1.48	.039	5.8	27.7
	SOUTHEAST SECTION.										
		1887.									
89	Georgia avenue, between Third and Fourth.	Oct. 3	Clear		485	.032	.060	.40	.010	70.0	160.4
272	.....do	Dec. 14	Turbid; roots		.....	.012	.028	.44	.....	27.0	99.5
263	Ninth and Georgia avenue	Dec. 5	.....		895	.020	.100	.80	Trace.	50.0	145.0
		1888.									
322	.....do	Jan. 4	Turbid		885	.052	.108	.68	.001	40.0	140.0
		1888.									
662	B, between Thirteenth and Fourteenth	May 8	.....do	Yellow	166	.348	.192	2.76	.030	6.0	20.5
1252	.....do	Nov. 6	.....do	....do	396	.112	.160	2.12	.025	25.0	63.5
866	125 Sixth street	July 11	.....		368	.064	.076	.82	.045	28.0	42.0
932	1116 New Jersey avenue	July 31	.....	Yellow tinge	870	.004	.072	.30	.025	45.0	242.3
935	South Carolina avenue, between Sixth and Seventh.	July 31	Turbid	.....	566	.076	.144	1.78	.006	15.0	68.5
1433	Sixth and A streets	Dec. 31	.....do	Yellow	394	.272	.076	1.14	.....	25.0	78.0
1506	Sixth and B streets	Jan. 21	Slightly turbid	Yellow tinge	236	.004	.552	2.90	.025	15.0	41.5
1446	Thirteenth and D streets	Jan. 7	Cloudy	....do	842	.032	.292	3.18	.015	25.0	112.5
1452	South Capitol and D streets	Jan. 7	Turbid	Yellow	2,486	5.220+	1.600+	8.76	.028	100.0	136.5
1481	Fourth and Pennsylvania avenue	Jan. 15	Clear	Blue tinge	205	.032	.060	.50	.013	15.0	42.0
1508	E, between Twelfth and Thirteenth streets.	Jan. 21	.....do	Yellow tinge	340	.224	.100	1.10	.045	16.0	54.5
1539	Eighth and I streets	Feb. 11	.....do	.....	442	.....	.100	.48	.015	25.0	98.0
1638	726 Eleventh street	Mar. 18	..... do	.....	860	.032	.148	2.10	.028	38.0	176.5

1666	Seventh, between B and C	Apr. 2	do		384	.032	.324	1.14	.015	15.0	74.5
1730	Second and I streets	Apr. 22	do		872	.004	.072	.84	.005	45.0	208.8
1749	Pennsylvania avenue and Third	Apr. 29	Clear; org. odor		248	.228+	.124	.78	.005	18.0	65.5
1857	Seventh, between G and L	May 20	Slightly turbid; org. odor.		1,052	.108	.560	.90	.020	55.0	289.5
2378	Ninth, between G and I	Aug. 26	Clear		840	.004	.236	.50	.020	55.0	139.5
	Average				659	.314	.222	1.56	.017	34.2	113.6
	SOUTHWEST SECTION.										
70	F, between Delaware avenue and North Capitol.	Sept. 27	Clear		1096	.405	.170	Chalyb.	.005		174.4
151	B, between First and Second streets				1270	.264	.200	2.80	.600	6.0	165.0
		1889.									
1507	do	Jan. 21	do		928	.048	.220	.70	.018	45.0	106.0
555	Half street, between F and G	Apr. 3	Turbid		285	.420	.192	3.98			32.0
619	Half street, between H and I	Apr. 24			170	.392	.192	.90	Trace.	Trace.	43.0
1228	Twelfth and C streets	Oct. 30	Slightly turbid	Yellow tinge	406	.120	.192	2.40	Trace.	23.0	98.0
1294	Four-and-a-half, between N and O streets.	Nov. 20	Clear	do	790	.080	.124	2.30	.058	35.0	187.5
1295	Four-and-a-half and F streets	Nov. 20	Turbid	do	690	.080	.212	3.72	.035	28.0	152.0
2118	do	July 2	do	Yellow	452	.008	.048	4.70	.100	15.0	111.3
2219	do	July 22	Clear; slight odor		476	.024	.140	.68		15.0	121.5
2343	do	Aug. 19	do	Slightly yellow	500	.048	.204	.50	.012	8.0	119.0
1322	Twelfth and E streets	Nov. 27	Strong odor; turbid	Yellow	128	1.800+	.240	1.22	.068	8.0	24.5
1637	Eleventh and F streets	Mar. 18	Clear		1030	.012	.112	.64	.018	55.0	239.5
1729	Virginia avenue and Seventh street	Apr. 22	Turbid		426	.060	.100	3.12	.038	25.0	90.5
1933	Third and L streets	June 4	do	Yellow	524	.400	.132	.78	Trace.	25.0	167.8
1957	do	June 11	Slightly turbid	do	550	.412	.100	1.50	.060	15.0	185.0
2117	Four-and-a-half and M streets	July 2	Turbid	do	540	.032	.160	1.16	.112	25.0	112.0
2218	do	July 22	Slightly turbid		914	.104	.088	.90	.020	28.0	109.5
2145	Four-and-a-half, between C and D	July 9	Clear		306	.060	.132	1.12	.016	15.0	56.5
2221	Sixth and Maryland avenue	July 22	Slightly turbid		558	.004	.060	.54	.024	8.0	192.5
	Average				587	.239	.151	1.77	.059	18.8	114.4
	NORTHEAST SECTION.										
		1887.									
257	312 K street	Nov. 15				.048	.180	1.75	.020	27.0	145.0
400	Eighth and C streets	Feb. 14	Clear		560	.060	.072	.24	Trace.	55.0	96.5
875	Sixteenth street and Benning's	July 17	Clear; strong odor		224	1.032	.660	5.98	.950	2.0	28.8
936	Second and E streets	July 31	do		716	.012	.060	.26		48.0	92.0
1018	F, between North Capitol and First	Aug. 21	Very turbid	Yellow	1076	.460+	.400+	4.92	.038	3.0	278.8
1114	Eighth and A streets	Sept. 18	Turbid	do	174	.148	.124	.88	.018	5.0	23.5
1142	do	Sept. 26	Milky		166	.060	.032	.22	.012	8.0	22.0
1115	Eighth and Maryland avenue	Sept. 18	Turbid	Yellow	532	.060	.108	1.38	.038	28.0	86.3
1141	do	Sept. 26	Clear	Yellow tinge	528	.004	.060	.64	.035	35.0	87.0
1181	Fourth and I streets	Oct. 9	Turbid	Yellow	300	.420	.104	1.86	.045	6.0	94.0
1200	do	Oct. 16	do	do	458	.152	.168	2.56	.045	8.0	89.0
1229	do	Oct. 30	Very turbid	do	412	.164	.240	3.80	.015	8.0	111.0
1182	Tenth, between B and C	Oct. 9	Turbid	do	300	.008	.032	1.36	.005	58.0	59.0

Questionable and condemned wells—Continued.

Serial No.	Locality.	Date.	Condition.	Color.	Total solids.	Free ammonia	Albuminoid ammonia.	Oxygen consumed.	N. as nitrites.	N. as nitrates.	Chlorine.
	NORTHEAST SECTION—continued.										
		1887.									
1389	Fifth and D streets	Dec. 12	Slight odor; slightly turbid.	Blue tinge	1094	.....	.164	.92	.035	25.0	467.5
1434	E, between Eighth and Ninth	Dec. 31	Cloudy	Yellow tinge	300	.004	060.	.62	.015	15.0	51.0
2249	575 Seventeenth street	July 29	Turbid	Yellow	*620	.008*	.140	1.16	.048	55.0	102.5
	Average				523	†.165	.163	1.72	.082	24.1	114.6
	NORTHWEST SECTION.										
		1887.									
69	G, between New Jersey avenue and North Capitol	Sept. 27	Clear		741	.095	.065	.62	Trace.	30.0	143.8
87	Sixth, between F and G	Oct. 3	do		340	.028	.060	.40	.005	23.0	58.8
		1888.									
730	do	May 29	do		374	.040	.144	.58	Trace.	3.0	42.0
		1887.									
90	Third, between L and K	Oct. 3	do		795	.040	.048	.50	.040	90.0	190.0
117	Sixth and H streets	Oct. 10	Turbid	Yellow	260	2.280+	.440	7.46	Trace.	Trace.	77.5
148	Fifth, between P and Q streets	Oct. 17			400	.022	.056	.58	.005	25.0	75.0
150	L, between Sixth and Seventh	Oct. 17			430	.074	.044	.98	.025	24.0	106.0
188	B and Second streets	Oct. 24			379	.032	.096	.36	Trace.	16.0	78.6
		1888.									
354	1006 Sixteenth street	Jan. 16	do	Yellow	965	3.520+	.408+	5.36	.080	.2	672.5
554	F, between First and Second streets	April 3			884	.020	.072	1.42	.020	58.0	232.0
644	Louisiana avenue and Sixth streets	April 28	Clear		840	.052	.188	.82	.025	45.0	181.0
765	Eighth, between G and H streets	June 12	Turbid		464	2.160+	.268	3.40	.005	10.0	95.8
789	do	June 19	Cleaned		446	1.522+	.132+	3.04	.028	13.0	103.8
489	H, between Fourth and Fifth	Mar. 20			224	1.065+	.332+	3.46	.015	25.0	25.5
		1888.									
764	do	June 5	Clear		684	.140	.064	.88	.010	35.0	158.5
817	K, between Fourth and Fifth	June 19			1,058	.332	.120	3.18	.070	45.0	199.8
979	Fourth and M streets	Aug. 7	Turbid		520	.000	.108	1.12	.000	15.0	99.8
998	do	Aug. 14	Cloudy	Yellow	506	.000	.060	.84	Trace.	25.0	90.3
1024	D, between First and Second, cleaned	Aug. 21	Turbid	do	270	.320	.108	2.70	.035	6.0	39.8
1058	do	Aug. 28	Milky		196	1.280	.148	2.10	.010	5.0	22.3
1119	do	Sept. 18	Turbid	Yellow	189	1.540+	.060	1.16	.015	Trace.	18.0
1097	Twelfth and N streets	Sept. 11	Clear	Blue	212	.060	.044	.36	.005	8.0	38.5
1099	Eighth and F streets	Sept. 11	Turbid	Yellow	384	.060	.096	1.30	.035	8.0	44.8
1100	I between First and Second	Sept. 11	do	do	160	1.760+	.280	7.38	.075	Trace.	18.8
1171	Twenty-sixth between E and F	Oct. 6	Clear	Blue	972	.008	.072	.70	.006	55.0	149.5
1199	Q between Second and Third	Oct. 16	Slightly turbid	Yellow	204	.012	.048	.90	.015	25.0	42.5
1251	Sixth and K streets	Nov. 6	Turbid	do	270	.024	.112	1.44	.025	.000	66.0

1269	Ninth and I streets	Nov. 13	Clear	Yellow tinge	291	.004	.048	.68	.045	15.0	57.5
1270	Thirty-sixth and O streets	Nov. 13	do	Blue tinge	986	.004	.060	.66	.035	45.0	136.5
1339	Pierce and New Jersey avenue	Dec. 4	Milky		286	.060	.132	3.52	.025	15.0	54.0
1387	L between Sixth and Seventh streets	Dec. 12	Slightly turbid	Blue tinge	526	.000	.068	.50	.013	25.0	112.5
1432	Twenty-third and G streets	Dec. 31	Turbid	Yellow	302	.048	.173	1.06	.025	18.0	74.0
1476	I between Twenty-first and Twenty-second	Jan. 14	Turbid; slight odor	Yellow tinge	450	.104	.244	.50	Trace.	13.0	94.5
1482	W. C. Orphans' Asylum	Jan. 15	Turbid	Yellow	84	.060	.052	.10	.015	.6	21.5
1732	L and New Jersey avenue	April 22	Slightly turbid		356	.032	.040	.16	.018	18.0	76.3
1858	New Jersey avenue between Sixth and Seventh	May 20	Milky	Yellow	520	.032	.100	.54	.030	28.0	119.5
1892	do	May 28	Turbid	Slightly yellow	480	.020	.112	.68	.024	8.0	113.8
1893	Stoughton street	May 28	Clear	Straw	72	.020	.232	2.46	.000	1.1	3.8
2079	441 M street	June 25	do		840	.004	.148	.36	Trace.	13.0	182.0
2147	Third and R streets	July 9	do		400	.004	.072	.34	.020	35.0	78.3
2185	R between New Jersey avenue and Fifth	July 16	do		410	.020	.012	.21	.272	8.0	76.8
2263	do	Aug. 5	do		486	.108	.180	.56	.300	8.0	82.5
2220	Third between G and H	July 22	Slightly turbid		554	.008	.216	1.48	.020	18.0	116.0
2247	Third between G and Massachusetts avenue	July 29	Turbid	Yellow	710	.252	.060	1.70	.008	9.0	115.5
2284	736 Fifth street	Aug. 13	Clear	Light straw	820	.360	.140	1.76	.900	38.0	212.5
2381	507 Rhode Island avenue	Aug. 26	Very turbid		412	.300	.420	3.06	.000	Trace.	51.0
2399	1034 Fourth street	Sept. 2	Milky		372	2.620+	.060	1.28	1.000	3.0	51.5
2408	Third and Indian avenue	Sept. 9	Clear		406	Trace.	.240	.28	.032	25.0	74.0
	Average				478	.429	.135	1.56	0.69	20.0	91.1

* Deliquescent.

† Or. 1152.

The averages of the results for these classes and sections are as follows:

Passable wells.

	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	Nitrogen as nitrites.	Nitrogen as nitrates.	Chlorine.	No. of wells.	Per cent.
County	133	.020	.066	.67	.....	6.1	16.5	12	50
Southeast	242	.015	.071	.79	.....	12.1	60.2	6	21
Southwest*	566	.008	.043	.88	.....	29.0	111.0	1	5
Northeast	265	.023	.124	1.54	Trace.	26.0	31.8	3	21
Northwest†	278	.012	.064	.60	Trace.	12.7	54.4	18	28

Questionable and condemned wells.

County	165	.060	.123	1.48	.039	5.8	27.7	12	50
Southeast	459	.314	.222	1.56	.017	34.2	113.6	22	79
Southwest	567	.238	.151	1.77	.040	18.8	114.4	21	95
Northeast	523	.165	.163	1.72	.082	24.1	114.6	16	79
Northwest‡	478	.429	.135	1.56	.069	20.0	91.1	46	72

Of the whole number of wells examined 75 per cent. were questionable or bad. In the county half were good, showing the character of the ground water before being affected with any pollution. The well No. 2222, at the corner of Woodley Lane and the Tenallytown road, has a depth considerably more than 100 feet, and furnishes by far the purest water in the District which has been analyzed. It is free from nitrites and nitrates and free ammonia, contains but .020 parts per million of albuminoid ammonia and only 4 parts of chloride. The remainder are shallow wells and in some instances, probably, springs, which have been excavated and walled up. There seems to be no reason to believe that in the higher parts of the city water equal to that now found in the surrounding country did not occur originally. The consequences of the gradual pollution of the soil during the past 80 or 90 years is therefore strikingly brought out by the averages for the several sections of the city. The proportion of passable wells in each is about the same, except in the low-lying southwestern division where the swampy or peaty nature of the underlying soil has undoubtedly always affected the character of the ground water in the majority of instances.

In some wells, also, the water is of a decidedly mineral nature, but the length of this report prevents the taking up of this subject, and for the same reason it would be impossible to enter here in detail into a consideration of the sanitary merits or demerits of each particular well. This must be left to the reader, who can examine the results in the light of my preceding remarks or according to his own views or those of others, the interpretation of water analyses not being upon such a fixed basis as to expect from different individuals always the same conclusion.

From the chemical evidence, combined with the environmental, the water department has felt itself justified in closing many wells, but in other cases the weight of the results in the laboratory has not been deemed sufficient to warrant such a proceeding. Actual evidence or even suspicion of the derivation of disease from any city well has, to my knowledge, never been found, but a discussion of my results as merely one side of the whole question of the well-water supply of the city belongs more properly to the health officer than to my office. Following is a list of wells abandoned.

PUMPS REMOVED AND WELLS ABANDONED.

Year ending June 30, 1888.—Corner Ninth and Georgia avenue, southeast; corner Eighteenth and E streets, northwest; Sixteenth street, between U and V, northwest.

Year ending June 30, 1889.—Pennsylvania avenue, between Twenty-third and Twenty-fourth streets, northwest; corner Fourteenth and P streets, northwest; corner Sixth street and Massachusetts avenue, northwest; South Carolina avenue, between Sixth and Seventh, southeast; corner Third and Massachusetts avenue, northwest; corner Four-and-a-half and P streets, southwest; Four-and-a-half street, between N and O, southwest; corner Twelfth and D streets, southwest; Seventh street, between G and I, southeast; Thirty-second street extended; corner Third and L streets, southwest.

* Only 1 analysis.

† Of the whole, 25.

‡ Of the whole, 75.

‖ Thirty-seven wells give .077; 9 give 1.972.

I may add that our wells are probably as good or better than those of the larger cities. Analyses of 110 wells in New Haven, classed in accordance with the suspicious nature of their surroundings, the most suspicious in the first class, and so on were made in 1886 by Drs. Smith and Lockwood.* Their averages are as follows:

Class.	Total solids.	Free ammonia.	Albuminoid ammonia.	Nitrogen as nitrites.	Nitrogen as nitrates.	Chlorine.
1	713	4.09	.15	.09	36	72
2	348	1.46	.12	.06	17	31
3	673	2.57	.12	.10	38	70
4	302	.20	.12	.11	11	25

As a whole these are bad waters and dangerous. Some individual analyses show passable wells, others water little better that sewage, as for example:

Well No. 15.

Total solids	1,542
Free ammonia	.45
Albuminoid ammonia	.47
Nitrogen as nitrites	.15
Nitrogen as nitrates	87
Chlorine	185

Disease was plainly attributable to some of these wells, but similar rank pollution has never been equaled in the District, and, owing to the careful supervision of our wells, probably never will be. If the wells are to be kept open a liberal appropriation for their care and protection is indispensable; or, what I should most urgently recommend would be that Congress be asked to increase the appropriation for wells and pumps to such an amount that in those portions of the city where they are most in need and where it is possible a number of deep wells be sunk by boring, and cased to the bottom with iron pipe so as not to admit of the possibility of surface contamination.

HYDRAULIC CEMENTS.

In construction work in the District, cements, both of the natural and Portland classes, are contracted for to fill certain specifications. The large amount involves a great deal of labor for its thorough inspection. Until the past year this inspection was confined to collection of samples while in use on the work and subsequent testing in the laboratory. This has afforded a knowledge of the character of the cement only after it has gone into the work and has merely served as warning in regard to the future use of the same lot. The necessity of an opportunity of thorough inspection of the cement before its use led to the construction of a small cement house, where, during storage, tests could be made before issue of any particular lot. The capacity of the house has, however, been too small for thorough work, as a period of at least twenty-eight days should elapse before accepting any lot of cement. The usual rule has been to draw samples from one barrel in every five and judge the character of a car load or lot from the tests of these samples. Frequently, however, only the preliminary tests of fineness, setting, and tensile strength at one day have been possible before issue. With the brand in use during the past year it was fortunate that its character was so well known as to make it possible to decide fairly well as to its suitability from these determinations. With some of the other brands of cements of a magnesian nature this preliminary test will not serve, so that the extension of the present storage capacity, as now in process of realization, is most necessary.

TESTING CEMENT.

What the exact qualities of a perfect hydraulic cement are is most difficult to define, except in so far as to say that it shall acquire a high tensile strength, not deteriorating in air or water, nor becoming brittle with age, but exactly what confers these properties still remains an open question. How to carry out and interpret the results of various tests of cements is perhaps not so uncertain, but at least involves great care and study and may become a dangerous affair, for many reasons, when undertaken by those not thoroughly acquainted with the subject and with the particular cements to be tested. The ordinary testing of cement consists mainly in the determination of tensile strength at various intervals of time and under various conditions. Aside from the real value to be attached to this test it is evident that whatever information is to be derived from it must depend upon the tests being made under very exact conditions. The recommendations given by the committee of the

* Report State Board of Health Commissioners, 1886, p. 265.

The averages of the results for these classes and sections are as follows:

Passable wells.

	Total solids.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	Nitrogen as nitrites.	Nitrogen as nitrates.	Chlorine.	No. of wells.	Per cent.
County	133	.020	.066	.67	.....	4.1	18.5	12	50
Southeast	242	.015	.071	.79	.....	12.1	60.2	6	21
Southwest*	566	.008	.048	.88	.....	28.0	111.0	1	5
Northeast	265	.028	.124	1.54	Trace.	24.0	31.8	3	21
Northwest†	278	.012	.064	.60	Trace.	12.7	54.4	18	28

Questionable and condemned wells.

County	165	.060	.123	1.48	.039	5.8	27.7	12	50
Southeast	659	.314	.222	1.56	.017	34.2	113.6	22	79
Southwest	587	.238	.151	1.77	.059	18.8	114.4	21	95
Northeast	523	.165	.163	1.72	.082	24.1	114.6	16	79
Northwest*	478	‡.429	.135	1.56	.069	20.0	91.1	46	72

Of the whole number of wells examined 75 per cent. were questionable or bad. In the county half were good, showing the character of the ground water before being affected with any pollution. The well No. 2222, at the corner of Woodley Lane and the Tenallytown road, has a depth considerably more than 100 feet, and furnishes by far the purest water in the District which has been analyzed. It is free from nitrites and nitrates and free ammonia, contains but .020 parts per million of albuminoid ammonia and only 4 parts of chloride. The remainder are shallow wells and in some instances, probably, springs, which have been excavated and walled up. There seems to be no reason to believe that in the higher parts of the city water equal to that now found in the surrounding country did not occur originally. The consequences of the gradual pollution of the soil during the past 80 or 90 years is therefore strikingly brought out by the averages for the several sections of the city. The proportion of passable wells in each is about the same, except in the low-lying southwestern division where the swampy or peaty nature of the underlying soil has undoubtedly always affected the character of the ground water in the majority of instances.

In some wells, also, the water is of a decidedly mineral nature, but the length of this report prevents the taking up of this subject, and for the same reason it would be impossible to enter here in detail into a consideration of the sanitary merits or demerits of each particular well. This must be left to the reader, who can examine the results in the light of my preceding remarks or according to his own views or those of others, the interpretation of water analyses not being upon such a fixed basis as to expect from different individuals always the same conclusion.

From the chemical evidence, combined with the environmental, the water department has felt itself justified in closing many wells, but in other cases the weight of the results in the laboratory has not been deemed sufficient to warrant such a proceeding. Actual evidence or even suspicion of the derivation of disease from any city well has, to my knowledge, never been found, but a discussion of my results as merely one side of the whole question of the well-water supply of the city belongs more properly to the health officer than to my office. Following is a list of wells abandoned.

PUMPS REMOVED AND WELLS ABANDONED.

Year ending June 30, 1888.—Corner Ninth and Georgia avenue, southeast; corner Eighteenth and E streets, northwest; Sixteenth street, between U and V, northwest.

Year ending June 30, 1889.—Pennsylvania avenue, between Twenty-third and Twenty-fourth streets, northwest; corner Fourteenth and P streets, northwest; corner Sixth street and Massachusetts avenue, northwest; South Carolina avenue, between Sixth and Seventh, southeast; corner Third and Massachusetts avenue, northwest; corner Four-and-a-half and P streets, southwest; Four-and-a-half street, between N and O, southwest; corner Twelfth and D streets, southwest; Seventh street, between G and I, southeast; Thirty-second street extended; corner Third and L streets, southwest.

*Only 1 analysis.
†Of the whole, 25.
‡Of the whole, 75.
‖Thirty-seven wells give .077; 9 give 1.972.

I may add that our wells are probably as good or better than those of the larger cities. Analyses of 110 wells in New Haven, classed in accordance with the suspicious nature of their surroundings, the most suspicious in the first class, and so on were made in 1886 by Drs. Smith and Lockwood.* Their averages are as follows:

Class.	Total solids.	Free ammonia.	Albuminoid ammonia.	Nitrogen as nitrites.	Nitrogen as nitrates.	Chlorine.
1	713	4.09	.15	.09	36	72
2	348	1.46	.12	.06	17	31
3	673	2.57	.12	.10	38	70
4	302	.20	.12	.11	11	25

As a whole these are bad waters and dangerous. Some individual analyses show passable wells, others water little better that sewage, as for example:

Well No. 15.

Total solids	1,542
Free ammonia	.45
Albuminoid ammonia	.47
Nitrogen as nitrites	.15
Nitrogen as nitrates	87
Chlorine	185

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In construction work in the District, cements, both of the natural and Portland classes, are contracted for to fill certain specifications. The large amount involves a great deal of labor for its thorough inspection. Until the past year this inspection was confined to collection of samples while in use on the work and subsequent testing in the laboratory. This has afforded a knowledge of the character of the cement only after it has gone into the work and has merely served as warning in regard to the future use of the same lot. The necessity of an opportunity of thorough inspection of the cement before its use led to the construction of a small cement house, where, during storage, tests could be made before issue of any particular lot. The capacity of the house has, however, been too small for thorough work, as a period of at least twenty-eight days should elapse before accepting any lot of cement. The usual rule has been to draw samples from one barrel in every five and judge the character of a car load or lot from the tests of these samples. Frequently, however, only the preliminary tests of fineness, setting, and tensile strength at one day have been possible before issue. With the brand in use during the past year it was fortunate that its character was so well known as to make it possible to decide fairly well as to its suitability from these determinations. With some of the other brands of cements of a magnesian nature this preliminary test will not serve, so that the extension of the present storage capacity, as now in process of realization, is most necessary.

TESTING CEMENT.

What the exact qualities of a perfect hydraulic cement are is most difficult to define, except in so far as to say that it shall acquire a high tensile strength, not deteriorating in air or water, nor becoming brittle with age, but exactly what confers these properties still remains an open question. How to carry out and interpret the results of various tests of cements is perhaps not so uncertain, but at least involves great care and study and may become a dangerous affair, for many reasons, when undertaken by those not thoroughly acquainted with the subject and with the particular cements to be tested. The ordinary testing of cement consists mainly in the determination of tensile strength at various intervals of time and under various conditions. Aside from the real value to be attached to this test it is evident that whatever information is to be derived from it must depend upon the tests being made under very exact conditions. The recommendations given by the committee of the

* Report State Board of Health Commissioners, 1886, p. 265.

Society of Civil Engineers are very excellent with a few additions and, when combined with experience, will lead to results which may be relied on for all that such tests are worth. The conditions should be as follows:

(1) The cement for each batch to be weighed out, in amount depending on its setting properties.

(2) The water for making mortar to be measured out for each batch in the exact proportion shown by experience to be necessary for making a dry mortar in which, in the mold, water will appear slightly on the surface on tamping.

(3) Thorough and careful mixture of the mortar on an impervious slab.

(4) Care and experience in making the briquettes, using an "engineer pattern" mold in which the briquette should reach a set before removing and keeping them covered with a damp cloth while setting to prevent drying out and air cracking.

(5) Immersion of the briquettes, when hard set, for twenty-four-hour test and preservation in a damp atmosphere for twenty-four hours before immersion for the longer tests, with frequent changes in position so that an equal set may be obtained.

(6) Making sand briquettes in the same careful way, using always as sand 20-mesh crushed quartz, such as is obtained from sandpaper manufacturers.

(7) Use of water neither too cold nor too warm, 60° to 80° F., and immersion of the briquettes in fresh water of like temperature. With changes in the temperature of the water between summer and winter considerable differences may ensue in the results of tests of some cements, but with a view to practice the temperature within the above limits is accommodated to the seasons.

Briquettes made in accordance with these rules and broken with care give in our hands results of great regularity, and we find that for any one interval of time three are quite sufficient, the differences being rarely more than a few pounds (2 to 6) for the three, except in the case of Portland. In addition to tests for tensile strength that of the time of setting is oftenest made, but often carelessly. This test can only be satisfactorily made with Gilmore's weighted wires, which give without trouble constant results except in the case of hard-set with some slow magnesian cements, which will scratch for many hours after their initial set. In making this test the temperatures of the water and air are important conditions and should always be noted. Fineness is of course a part to be considered, and in determining this the only feature to be guarded against is that the sieves often do not represent what they are supposed to.

Weight per bushel or density is of value as an index of the degree of burning, especially with Portland, but is rather difficult to determine with accuracy and is generally neglected.

A complete chemical analysis is probably the best aid to the interpretation of the physical tests, but unfortunately is too lengthy and elaborate to be often attempted. Finally the behavior of the cement when exposed to the action of water is a most important characteristic.

THE VALUE AND INTERPRETATION OF TESTS.

A high tensile strength is of course a desideratum in cement, but it must be high at the end of one or more years as well as in the beginning, and it can not be universally affirmed that because a cement gives high results at one day, one week, or one month, that it is preferable to one giving much lower tests, because the latter cement may continue to gain strength long after the former has ceased and may even go on to exceed it after an interval of many months, while cements gaining their strength rapidly may do almost nothing in this way after a month or two. For this reason tests of tensile strength up to three months must be interpreted with care and with relation to other characteristics of the cement. Rapid rate of gaining strength is by no means always desirable, and of course it must be remembered that laboratory tests are much higher than the results on the work where more water is necessarily used.

Tests of tensile strength with sand are quite as necessary or even more so than those of neat cement, and to obtain uniform results which can be compared with others crushed quartz of a definite size must be used, otherwise the tests become as much one of the sand as of the cement.

Cement having high tensile strength when mixed neat may not show an equivalent with sand either from coarse grinding, improper burning, or incorrect proportions of its constituents, so that neat tests alone would prove most deceptive. Sand tests begin to be of value at seven days, but should be continued much longer. Neat cement frequently acts badly, and displays disadvantageous or condemnatory qualities in briquettes, when none appear on mixture with sand, so that neither form of tests can be omitted. If either test is bad the cement should be rejected.

During the progress of the tests for tensile strength, as has been said, deficiencies in the character of the cement are often displayed. These are too slow or too quick setting, heating of the mortar, blowing and cracking and expansion.

The time of setting will necessarily vary somewhat with the character of the cement. A Portland for ordinary surface work should not set in less than an hour and a natural cement in less than fifteen minutes unless the temperature of the air and water at the time of mixing are very high, over 80° F., as sometimes occurs here in the summer months; but with natural cements the extreme length of time of setting may be allowed to vary somewhat, depending upon whether it is of straight lime or magnesian origin, and upon what the results of the tensile tests are; so it is probably advisable to judge each brand of cement from past experience of its nature and qualities without attempting to make specifications which shall apply to and cover all cements.

With the Potomac cements, so generally in use with us, there are two classes which have been furnished with the intention of complying with the same specifications. Experience leads me to believe this to be an injustice, and that the only universal specification should be that all these cements must at one year have a certain tensile strength, neat and with sand, with a regular rate of increase and no decided decrease, at least with sand. For the earlier tests the magnesian cements must have very different qualities and give very different results from the lime cements. Magnesian cements, with a tensile strength of only 30 pounds in neat briquettes at one day, may acquire more strength at the end of a year than some lime cements having a strength of 160 pounds at one day, but not increasing after three months. In fact some of these high breaking cements at one day actually lose something between six months and one year.

For the Rosendale cements different methods of reasoning must be pursued, so that I believe each brand must be judged on its own merits and not on a few early tests. What the cement accomplishes at the end of a long period without signs of failure or degeneration must be the evidence of its value, although its practical applicability to any particular set of conditions must also be considered. For instance, a quick setting Portland is not desirable for surface work, but must be sought for in cases where immediate results must be had as in works under water. In the same way the slow setting and slow strength-acquiring magnesian cements are unsuitable for arch-work, where centers must be drawn often, or for hydranlic base for pavement over which it is desirous to make an early haul; but for ordinary masonry and concrete the latter are perhaps quite as desirable.

All brands must be carefully watched for blowing and cracking. This occurs in several ways. The cement may be hot from free lime, a difficulty disappearing with air slaking, or in very slow examples blowing may take place on immersion in water, due to improper proportions or burning. Again, in the magnesian cements cracks sometimes develop after six or seven days and entirely disintegrate the briquette. Such results, which are very apparent in the briquettes or pats of neat cement, often cease to appear with sand, due to mere mechanical division and modified conditions of setting. In many cases of cracking and blowing it has been found, under the magnifying glass, that there are deposits of calcium carbonate in the fissures, at times merely granular or crystalline, and again filled with bubbles of evolved carbonic acid. It is probable that any cement containing an excess of carbonates derived from air slaking is undesirable and liable at times to blow even when very slow setting.

Blowing in natural cements may be due to either excess of lime or to imperfect burning. Overclayed natural cements are not common with us, and blowing has never, to my knowledge, been due to this fault, although overclayed Portlands do so. We are much in need of extended analyses in connection with these different characteristics, but up to the present time but little has been published on the subject. It must be remembered, however, that the same ultimate material, which would, of course, give the same analysis, may be burned in many different ways, so that the interpretation of analyses must be made with care in connection with the remaining history of the cement. Unfortunately a chemical and rational supervision of our cement works is at present rare, and where carried on is preserved for private and commercial reasons, and not given out to the world. Too much cement is produced by blindly burning rock whose changeable character is not watched, and the results merely regulated by experimental mixing of rock in the kiln, without any other reason. In this mixing of strata in the kiln the general aim is to unite an overclayed rock with rock rich in lime, and at times the extremes are too large. Of course the resulting cement is no more homogeneous than if two separate cements were made, ground, and then mixed. A heavily overclayed cement can not correct one rich in lime, but can only tend to make blowing or cracking more certain, and mixing of this kind should only be attempted to a limited extent.

The best natural cement should be made by burning homogeneous rock, or if, as is the rule, this is impossible, a more natural process would seem to be the burning of each kind separately, and after a careful study of their properties, making the mixture then in the proper proportions to produce the required result. Too little attention, however, is paid to the quality of the rock in use, and for economy's sake, it is apt to be the case that surface rock is quarried, and compact and more valuable rock in deeper strata is not.

The size of the rock as it goes to the kiln should also be considered, some burning better in small pieces, others in large, and for good results the easier burning rocks should be left large, the harder broken small. It is fair to suppose, however, that small pieces with well regulated heats would burn more evenly. The shape of the kiln should, with careful observation, be found to be an adaptable element in the conditions, varying with different rocks as well as the amount and kind of fuel, and the length of time between drawings.

All these and many other details could be worked out on a firm basis were a thorough scientific study of the subject made at the works, and they have been mentioned here as pointing out the lines on which manufacturers must work to improve and render uniform the quality of our natural cements.

That a good natural cement is better than a poor Portland ought to go without saying, but unfortunately the name Portland has for years carried with it such a reputation that it is difficult to convince a large class that everything that is so called is not the most desirable cement, or to make people believe that in our markets are to be found some light burned Portland cements of an undesirable nature. When natural cements will furnish a concrete in which at the end of a few years the stone, or any form of the aggregate, will part as soon as the cement, as is frequently seen in our streets, it would seem unnecessary to go to the extent of using Portland cement, except in cases where scouring or mechanical action comes into play, or immediate high tensile strength is required. A valuable contribution to the literature of this subject is contained in a paper entitled "Hydraulic cements, natural and artificial; their comparative value," by U. Cummings, read before the Society of Arts of the Massachusetts Institute of Technology, November 10, 1887, although some of the statements must be accepted with caution.

RESULTS OF CEMENT TESTS.

From the large number of cement tests made since my last report the following have been selected as typical of the different brands. Owing to the fact the contract for supplying cement has been, until recently, entirely with the Cumberland Company, the majority of tests have been of this cement, although at the beginning of the last fiscal year a certain amount of Round Top was used, and from time to time tests of other cements have been made for private individuals.

When any cause for contention has arisen in the past, bringing into discussion the tests of this office, it has been found necessary to have all tests reported in a very definite and full manner. To reach this end the following method and form have been devised, have proved very satisfactory and have been adopted by others:

DISTRICT OF COLUMBIA.

OFFICE OF THE INSPECTOR OF ASPHALT AND CEMENTS,

Washington, D. C., July 24, 1889.

[Test of cement No. 2096; brand, Cumberland; to be used from cement house on sewer work; lots numbered 26-1 to 26-27; sampled June 26, 1889; made up 2 p. m., June 27, 1889. Machine, Riehle 1,000 pound cement tester. Moulds, Riehle engineer pattern. Methods, recom. Com. Am. Soc. Civ. Engineers. Temperatures, always above 60° F. Setting, Gilmore's wire test. Sand, standard 20-30 mesh quartz.]

No. of briquette	Per cent. of water to make stiff mortar.	Coarser than—			Setting.		Time of briquette in—				Tensile strength.	
		50 Mesh.	100 Mesh.	90 Mesh.	Wire. Light.	Test. Heavy.	Mould.	Air moist.	Water.	Total.	Neat cement.	2 parts sand.
2809	36.0	5.3	15.2	15.0	22′	29″	t. s.	.....	24 hrs.	1 day	138	.....
10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	134	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	141	.....
2812*	.....	.....	.....	.....	.....	.....	t. s.	1 day	6 days	7 days	272	.....
13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	268	.....
14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	270	.....
15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	276	.....
2816	.....	.....	.....	.....	.....	.....	t. s.	1 day	2 days	28 days	372	.....
17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	370	.....
18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	blows	.....
19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	370	.....
2820	15.0	.....	.....	.....	23′	32′	t. s.	1 day	6 days	7 days	.....	103
21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100
22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	102
23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	98
2824	.....	.....	.....	.....	.....	.....	t. s.	1 day	27 days	28 days	.....	210
25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	198
26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	198
27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	196

* Temperature of air 80° F.; of water 78° F.

Cumberland cements from cement-house, Nos. 939, 1083, 1084, 1120, 1122, *and* 1206, *August and September*, 1888.

	939.	1083.	1084.	1120.	1206[1].	1206[2].
Initial set (light wire)	15′	34′	40′	30′	16′	15′
Hard set (heavy wire)	52′	66′	1 h. 25′	52′	38′	33′
Tensile strength:						
Neat:						
One day, pounds	106	98	46	88	102	108
Seven days, do	226	260	168	250	174	233
Twenty-eight days, do	284	268	278	300	362	360
Six months, do	341	364	304	298	.....	300
Two sand:						
Seven days, do	102	72	50	94	46	40
Twenty-eight days, do	200	160	112	178	124	162
Six months, do	380	268	236	286	260	260
One year, do	394					

Cumberland cement No. 1473 *and* 1493, *January* 11 *and* 19, 1889.

	1473.	1493.
Fineness:		
Remaining on 50 mesh	5.5	5.5
Remaining on 100 mesh	12.5	12.5
Water for stiff mortar	36.0	36.0
Tensile strength:		
Neat:		
One day, pounds	158	126
Seven days, do	264	164
Twenty-eight days, do	388	324
Three months, do	386	368
Six months, do	414	350
Two sand:		
Seven days, do	80	34
Twenty-eight days, do	138	120
Six months, do	.....	182

The preceding tests of Cumberland cement are given from among some of those which have been extended over sufficient time to give a fairly complete history of the brand. During the summer months much of this cement was necessarily rejected on account of its extremely rapid setting properties which excluded it from complying with the specifications.

From the results in all the lots, conclusions at the end of twenty-eight days would be that the cements were highly satisfactory, having developed a remarkably good tensile strength, both neat and with sand. The results of the six months' tests, however, show that by that time three lots, which had developed unusual strength at one month, have either ceased to gain after that or have fallen off in neat condition. With sand, however, the gain continues. How is this to be interpreted? I believe it to be due to the too-rapid crystallization of the neat cement and consequent brittleness at six months.

When mixed with sand this result is avoided and satisfactory tests obtained. If the cement is not to be used neat, as of course is not the case in our work, no danger need be feared, although a more even cement is to be desired. Lot No. 939 seems to be the most perfect of any, although we do not know its history at the end of two or more years. The slower-setting cements are no doubt safer, unless their slowness is due to imperfection, and slowness can be obtained by thorough air-slaking. In the summer months, when the demand is large and the output of the works scarcely equal to it, the freshness of the cement causes it to be very rapid in setting, and undesirable for the above reasons. Here is an example. A cement setting in six and fourteen minutes gave the following tests:

Neat:	
One day, pounds	90
Seven days, do	298
Twenty-eight days, do	288
Two sand:	
Seven days, do	96
Twenty-eight days, do	196

This quick cement gets all its strength in seven days when neat, although it increases in strength at later dates with sand; but it would probably become brittle at three to six months in neat form and much deteriorated, of which there are already signs at twenty-eight days. Carrying this a step further might produce evident blowing and cracking.

This same effect may be due to other causes as well, where the difficulty is probably in the composition or burning of the cement instead of lack of air-slaking. Here is an example:

Initial set		1 hour 35 minutes.
Hard set		2 hours 46 minutes.
Tensile strength:		
Neat:		
One day	pounds	68
Seven days	do	324
Twenty-eight days	do	366
Three months	do	380
Two sand:		
Seven days	pounds	96
Twenty-eight days	do	196
Three months	do	240

This cement, which had been air-slaked over winter, shows too high a jump in seven days to be looked at with safety. A properly-balanced cement, with this rate of settling, gives (No. 2085 Round Top) for neat brequettes one day 64 pounds; seven days, 186; and twenty-eight days, 320 pounds.

Unfortunately, no analyses of these cements have been made. They are necessary for the proper interpretation of these results. I have only one analysis of this brand, which shows that it contains:

Water of hydration (slaking) and carbonic acid	7.97
Uncombined sand and clay	9.41
Combined silica	20.25
Alumina and iron oxide	14.76
Lime	41.96
Magnesia	3.19
Undetermined (alkalies, sulphuric acid, etc.)	2.46
	100.00

Initial set		3′
Hard set		7′
Tensile strength:		
One day, neat	pounds	128
Seven days	do	282
Twenty-eight days	do	434
Six months	do	400 380 478
Seven days, two sand	do	40
Twenty-eight days, two sand	do	56
Six months, two sand	do	200

I hesitate to attempt an interpretation of this analysis, but in connection with the time of setting and rapid gain of tensile strength, suspect that it must be overburned.

Round Top cement, No. 948, August 4, 1888.

Fineness:		
Per cent. on 50-mesh sieve		12.5
Per cent. on 100-mesh sieve		25.5
Water for stiff mortar		36.0
Initial set (light wire)		22′
Hard set (heavy wire)		1 h 23′
Tensile strength—		
Neat:		
One day	pounds	60
Seven days	do	180
Twenty-eight days	do	266
Two sand:		
Seven days	do	74
Twenty-eight days	do	160

SECOND SAMPLE.

Initial set (light wire)		13′
Hard set (heavy wire)		63′
Tensile strength—		
Neat:		
One day	pounds..	44
Seven days	do....	160
Twenty-eight days	do....	272
Two sand:		
Seven days	do....	66
Twenty-eight days	do....	156

Round Top cement No. 953, *August* 6, 1888. *Five samples.*

		No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
Initial set (light wire)		13′	13′	22′	13′	8′
Hard set (heavy wire)		58′	58′	1 hr. 24′	58′	22′
Tensile strength:						
Neat—						
One day	pounds..	64	50	44	63	38
Seven days	do....	140	183	146	136	186
Twenty-eight days	do....				220	280
Two sand:						
Seven days	do....	64	80	86	42	68
Twenty-eight days	do....	184	152	150	130	155

Round Top cement No. 1008, *Aug.* 13, 1888.

Residue on 50-mesh sieve		.75
Residue on 100-mesh sieve		11.50
Initial set (light wire)		25′
Hard set (heavy wire)		1 hr. 21″
Tensile strength—		
Neat:		
One day	pounds..	42
Seven days	do....	160
Twenty-eight days	do....	202
Two sand:		
Seven days	do....	82
Twenty-eight days	do....	158

Round Top cement No. 1082, *September* 6, 1888.

Initial set (light wire)		66
Hard set (heavy wire)		1 hr. 52′
Tensile strength:		
Neat:		
One day	pounds..	60
Seven days	do....	158
Twenty-eight days	do....	262
Six months	do....	360
Two sand:		
Seven days	do....	62
Twenty-eight days	do....	148
Six months	do....	362

The samples of Round Top cement with which the preceding tests were made show a gradual and satisfactory increase of strength at regular intervals and display none of the sudden aquisitions common in the Cumberland. During the limited period in which it was examined it was of excellent and uniform quality.

I have two analyses of this cement from samples of a previous year which are of interest. The following are the results:

Analysis of Round Top cement.

	No. 629.	No. 949.
Water of hydration and carbonic acid	8.80	6.60
Sand and clay uncombined	15.34	8.40
Combined silcia	15.72	21.76
Alumina and iron oxide	13.14	13.64
Lime	43.12	45.56
Magnesia	2.55	3.07
Undetermined	1.33	1.97
Total	100.00	100.00
Initial set	8′	13′
Hard set	11′	63′
Tensile strength:		
Neat:		
One day ..... pounds	60	44
Seven days ..... do	160	160
Twenty-eight days ..... do	243	270
Two sand:		
Seven days ..... do	14	66
Twenty-eight days ..... do	46	156
Six months ..... do	160	.....

The first sample is evidently underburned, containing much uncombined silica with the result of diluting its cementitious powers so that it acquires strength with sand slowly. It sets rapidly since some unslaked free lime is evidently present. The second sample is probably a normal and properly burned Round Top cement, as it agrees with the average in its physical properties. Harder burning would probably be a serious injury to this rock although giving greater initial strength.

Comparing this last analysis with that of the Cumberland sample it is plain how easy it would be to be led astray by the results of chemical analysis if considered alone and without reference to the physical tests. The ultimate composition of these cements is nearly the same, but the arrangement of the silicates probably very different. So it is again apparent that all forms of tests are dependent one on another for their interpretation.

Shepherdstown cement October 18, 1888, *No.* 1211.

Water for stiff mortar	38.0
Initial set (light wire)	1′
Hard set (heavy wire)	26′
Tensile strength:	
Neat:	
One day ..... pounds	26
Seven days ..... do	52
Twenty-eight days ..... do	216
Two sand:	
Seven days ..... do	12
Twenty-eight days ..... do	68

Shepherdstown cement May 7, 1888, *No.* 1767.

Fineness:	
Remaining on 50-mesh sieve	5.5
Remaining on 100-mesh sieve	14.5
Initial set (light wire)	11′
Hard set (heavy wire)	17′
Tensile strength:	
Neat:	
One day ..... pounds	59
Seven days ..... do	161
Twenty-eight days ..... do	269
Three months ..... do	370
Six months ..... do	450
Two sand:	
Seven days ..... do	34
Twenty-eight days ..... do	84
Three months ..... do	150
Six months ..... do	172

The two tests of Shepherdstown cement are typical, the first of its average quality, the second of its best condition.

Shepherdstown cement has only one serious drawback, and that is its initial weakness due to its magnesian nature. If time is no object the results are entirely satisfactory, averaging—

Neat:		
Seven days	pounds	62
Twenty-eight days	do	184
Six month	do	321
One year	do	376
Two sand:		
Seven days	do	20
Twenty-eight days	do	64
Six months	do	147

Unfortunately this initial weakness is a great disadvantage, as has been said, in the class of public work carried on in the District. For cement mortar in private buildings, etc., it is excellent. Could it be kept for any length of time to the standard of the sample No. 1767 it would be satisfactory. In all old work it has proved itself fully equal to other cements, at least where no initial deficiency was apparent. In an attempt to discover the cause of the lack of initial strength and other faults in this brand several analyses have been made which, together with one by De Smedt, are given below.

Analysis of Shepherdstown cement.

	De Smedt, 1885.	Special ledge, '88.	Average, 1887.	July, 1888, blows.	July, 1888 reburned.
Water of hydration and carbonic acid	7.00	5.13	8.66	7.37	7.37
Sand and clay uncombined	6.42	13.62	19.24	15.84	10.87
Combined silica	27.00	22.89	10.91	15.74	18.44
Alumina and iron oxide	16.04	9.36	7.58	6.83	8.37
Lime	32.24	34.83	33.44	35.37	35.02
Magnesia	9.59	11.33	16.11	17.23	17.54
Total alkaline earths	[41.83]	[46.16]	[49.55]	[52.60]	[52.56]
Sulphuric acid	.55	1.49	.....	.....	.....
Alkalies	.50	1.25	.....	.....	.....
	99.34	98.65	95.94	.....	.....
Initial set	.....	1 hr. 45′	.....	14	14′
Hard set	.....	.....	.....	1 hr. 45′	.....
Tensile strength:					
Neat:					
One day, pounds	35	38	.....	12	11
Seven days, do	85	98	115	34	24
Twenty-eight days, do	175	258	224	180	202
Three months, do	.....	.....	268	.....	.....
Six months, do	353	.....	.....	320	.....
One year, do	360	.....	.....	.....	.....
Two sand:					
Seven days, do	29	50	.....	20	.....
Twenty-eight days, do	90	110	.....	88	.....
Three months, do	130	.....	.....	.....	.....
Six months, do	140	230	.....	178	.....

These results are instructive. It will be seen that the best specimens that analyzed by de Smedt, contains the smallest amount of alkaline earths, and especially magnesia, with at the same time the most combined silica and alumina. The next best specimen, the cement from the special ledge, while an improvement on the other samples is so deficient in alumina that the proper double silicates do not form, and there is an excess of lime and magnesia, although more silica is in combination than in the other samples. The 1887 sample is far too rich in lime and magnesia for its combined silica and alumina, while the blowy sample is still worse. Reburning of this latter produces the result to be expected, the increase in the amount of combined silica and clay, but not in sufficient degree to correct the cement.

This seems to be a fair interpretation of these analyses and points to a radical defect in the rock, if our conclusions are correct. That this conclusion is not or may not be of general application to all cements is possible if the analysis given by Cummings for a cement which he says gives excellent results in masonry is correct. He gives in his paper already mentioned the following analysis of this cement:

Silicic acid	21.40
Alumina	7.73
Lime	42.21
Magnesia	28.66

The very incomplete nature of these figures, however, make them of uncertain value, and it hardly seems possible that a cement approaching this composition should have any initial strength as judged from our analysis and experience; at least they would not with our rock and method of burning, and yet Cummings states that the theoretical combination for a triple silicate is nearly perfect.

In this connection here is a partial analysis of a Rosendale cement labeled Star, and imported into Washington in 1888, which gave a test of only 8 pounds neat at the end of twenty-eight days:

Uncombined silica and clay	22.84
Combined silica	6.35
Alumina and iron oxide	7.24
Lime	35.41
Magnesia	15.39

It is not surprising that with this amount of combined silica and alumina no strength is attained until perhaps a year, but as compared with Mr. Cummings it might be a cement to give good results in masonry.

Antietam cement No. 2002. *June* 15, 1889.

Initial set (light wire)		14′
Hard set (heavy wire)		35′
Tensile strength:		
Neat:		
One day	pounds	40
Seven days	do	134
Twenty-eight days	do	254
Three months	do	354
Two sand:		
Seven days	do	20
Twenty-eight days	do	76
Three months	do	120

August 12, 1889. *No.* 283.

Fineness:		
Residue on 50-mesh sieve		7.5
Residue on 100-mesh sieve		21.5
Water for stiff mortar		34.0
Initial set (light wire)		28′
Hard set (heavy wire)		2h. 38′
Tensile strength:		
Neat:		
One day	pounds	40
Seven days	do	116
Twenty-eight days	do	280
Two sand:		
Seven days	do	26
Twenty-eight days	do	98

Antietam cement No. 2125. *Submitted as sample with bid July* 1, 1889.

Fineness:		
Residue on 50-mesh sieve		5.4
Residue on 100-mesh sieve		14.5
Water for stiff mortar		30.0
Initial set (light wire)		33′
Hard set (heavy wire)		1h. 59′
Tensile strength:		
Neat:		
One day	pounds	33
Seven days	do	162
Twenty-eight days	do	330
Three months	do	376
Two sand		
Seven days	do	48
Twenty-eight days	do	70
Three months	do	150

The preceding brand is a new one in this market. The cement is burned from a similar stone to the Shepherdtown, producing at the present time a product with higher initial strength, but at times liable to blow from an excess of lime. After a

study of the nature of their strata the company will no doubt produce a better article, although up to the present time large amounts of it have been successfully used. It must be tested to twenty-eight days, or at least seven, with sand and neat, as some of its defects do not appear until that time, and others only after six months.

Rosendale cement, Hudson River Cement Company. August 24, 1888. No. 1051.

Fineness:	
Residue on 50-mesh sieve	11.0
Residue on 100-mesh sieve	21.0
Water to make stiff mortar	30.0
Initial set (light wire)	60′
Hard set (heavy wire)	1 h. 48′
Tensile strength:	
Neat:	
One day ..... pounds	12
Seven days ..... do	67
Twenty-eight days ..... do	210
Six months ..... do	310
Two sand:	
Seven days ..... do	4
Twenty-eight days ..... do	60
Six months ..... do	118

New York and Bridge Rosendale cement.

Fineness:	
Residue on 50-mesh sieve	6.5
Residue on 100-mesh sieve	17.0
Water to make stiff mortar	30.0
Initial set (light wire)	1 h. 34′
Hard set (heavy wire)	2 h. 15′
Tensile strength:	
Neat:	
One day ..... pounds	80
Seven days ..... do	143
Twenty-eight days ..... do	336
Two sand:	
Seven days ..... do	34
Twenty-eight days ..... do	122

The tests of Hudson River Rosendale show the striking peculiarity of many of this class of cements which come to Washington. They show very little strength until from one to three months, and then do exceedingly well. Of course such material is not suitable for any public works.

The character of the better Rosendales is shown by the New York and Bridge brand, the sample coming from the naval observatory.

Dyckerhoff Portland cement No. 1007.

	No. 1760.	No. 1243.	No. 1007.
Water for stiff mortar, per cent		24.0	25.0
Initial set		Over 3 hrs.	†2 hrs. 30′
Tensile strength			
Neat:			
One day ..... pounds		79	230
Seven days ..... do		350	328
Twenty-eight days ..... do		* 680	498
Three sand:			
Seven days ..... do	86	110	94
Twenty-eight days ..... do	142	166	154
Three months ..... do	152		
Six months ..... do		246	

* Briquettes of this sample broke irregularly.

Portland cements.

	Residue on 50 mesh.	Residue on 100 mesh.	Initial set.	Hard set.	Neat.			Three parts sand.	
					One day.	Seven days.	Twenty-eight days.	Seven days.	Twenty-eight days.
			h. m.	*h. m.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Burham	8.2	19.5	0 15	2 25	190	362	454	64	110
Hemmorr	2.1	5.9	0 19	1 20	90	300	318	56	100
K. B. and S.	4.5	16.0	2 48	3 35	140	378	504	80	122
Heyne Bros.	3.6	13.6	2 5	.....	304	532	500	140	*150
Hilton	.....	22.0	0 5	11	164	693	786	.....	.....

* Three months 238.

But a limited amount of Portland cement has been used in the District works during the preceding year, Dyckerhoff being the brand which is most entirely satisfactory.

Many of the Portlands in our market have proved fiery and blowy, not having been sufficiently air-slaked. If kept for some time they become satisfactory. Good examples of this were found in some lots K. B. S. and so-called Black Cross cement, which, on receipt, set in from 3 minutes to 5 minutes, but at the end of a year or more were reduced to from 45 minutes to 1 hour. Their composition was not seriously at fault, but they were too light burned and too fresh for immediate use. Here are analyses of two samples of K. B. and S.:

	No. 1.	No. 2.
Water and carbonic acid	2.73	2.92
Uncombined clay	.46	.65
Combined silica	22.13	19.75
Alumina	6.23	7.48
Iron	5.61	5.01
Lime	60.69	61.38
Magnesia	1.37	1.28
Alkalies	.70	.75
Sulphuric acid	1.06	.97
	100.98	100.19

RELATION OF CEMENTS AND SAND.

In connection with the use of cements it is at times desirable to examine the sand in use to determine its value as an aggregate. I give an example of a fine white sand which was tested and its appearance was not entirely satisfactory. Standard quartz, 20 to 30 mesh, was used for comparison under the same conditions. The size of the sand under examination was as follows:

Remaining on—	
30 mesh	6.8
40 mesh	37.5
70 mesh	39.0
80 mesh	1.1
90 mesh	2.5
Dust and much clay	13.1
	100

Tests of tensile strength.

	Proportion of sand.					
	One part.		Two parts.		Three parts.	
	Standard.	The sample.	Standard.	The sample.	Standard.	The sample.
Cumberland cement:						
Seven days	136	48	60	8	24	0
Twenty-eight days	280	100	132	16	38	2
Three months	300	290	244	43	148	10
Dyckerhoff Portland:						
Seven days	368	294	194	110	86	80
Twenty-eight days	484	434	296	200	142	118
Three months	540	526	300	312	272	170

The inferior sand has a very decided effect upon the tensile strength in the earlier tests, especially with the natural cement, and is of course more apparent when the proportions of sand are large. The value of good, clean, sharp sand is well illustrated.

MISCELLANEOUS WORK.

Since my last report, in addition to much work of minor interest, which is of not sufficient importance for particular mention, several investigations have been carried on in this office of which a record should be made.

As a member of the "board to investigate the fall of the tower of the Church of the Covenant," I assisted in the preparation of a report upon this subject, which was handed to the Honorable Commissioners at the time, and which plainly displayed the carelessness in the use of cement mortars and building materials, which is too frequent. Further investigation has also shown that it is quite a common practice with builders to use an hydraulic cement mortar on its second set and after retempering over night, and there seems to be considerable difficulty in educating our masons toa better appreciation of this subject. While, in the course of a year or more, a mortar used in this way may acquire nearly as much strength as when properly handled, the initial condition is very undesirable. The fact that a retempered mortar works somewhat easier under the trowel seems to be the influencing condition, and on this account, even where there is no question of economy in saving mortar, it is preferred by the mason.

GAS IN THE ELECTRIC CONDUIT.

At your request, I examined and reported in April last on the amount of illuminating gas escaping into the underground conduits of the electric lighting company. At that time only a few localities were found where gas could be detected, and in these cases the amount was so small as to involve no danger. Since that time an extension of the system has been made on Ninth street to Mount Vernon Square, and at the upper end of this line there is now sufficient gas to cause an explosion whenever it is ignited, as has already happened once. The area of the conduit is, however, too small for the results of the explosion to be of much danger, as the man-holes are readily lifted and the force expended does but little damage, except to the conduit pipes. The responsibility for this condition of affairs should, however, be fixed where it belongs.

EXAMINATION OF BOTTLED BEERS.

At the request of the health officer an examination was made in December of the principal brands of bottled beer for sale in the city. The results are given in the following table:

Health office No.	Serial No.	Specific gravity of beer.	Specific gravity of wort.	Solids in wort.	Solids in beer.	Per cent. alcohol by weight in beer.	Reduction as maltose.	Albuminoids.	Ash.	Phosphoric acid of ash.	Chlorine of ash.	Alkalinity of ash in c. c. $\frac{N}{10}$ alkali.	Acidity of beer as lactic acid.	Salicylic acid.
480	1376	1.012	1.048	12.4	4.64	4.07	.91	.550	.209	.085	.010	2.5	.331	
481	1377	1.012	1.048	12.4	4.81	4.12	1.28	.791	.203	.070	.007	2.4	.277	
482	1378	1.017	1.056	14.5	6.27	4.42	1.76	.569	.185	.027	.002	1.4	.295	Large.
483	1417	1.017	1.045	11.7	5.95	3.81	1.19	.881	.257	.094	.001	1.8	3.60	
484	1418	1.017	1.046	11.9	5.94	3.99	2.01	.360	.161	.049	.003	1.8	.216	Present.
485	1419	1.018	1.045	11.7	5.23	4.05	1.19	.681	.231	.127	.001	1.5	.210	
486	1420	1.012	1.044	11.5	4.78	4.32	.93	.681	.250	.106	.004	1.9	.297	
487	1453	1.011	1.048	12.4	4.71	4.05	1.43	.469	.225	.095	.007	1.6	.239	
488	1454	1.016	1.058	15.0	5.94	4.56	1.05	.346	.204	.075	.010	1.6	.256	
.....	1456	1.020	1.052	14.2	6.51	3.76	1.45	.547	.198	.068	.016	2.1	.432	Large.
Average		1.015	1.049	12.8	5.48	4.11	1.32	.588	.212	.080	.061	1.9	.291	

Average of 28 samples analyzed by Crampton.

Specific gravity of beer	1.016	Albuminoids	.563
Specific gravity of wort	1.060	Ash	.279
Solids in beer	5.53	Phosphoric acid of ash	.077
Per cent. alcohol by weight in beer	4.63	Acidity of beer as lactic acid	.082
Reduction as maltose	1.65		

There seems to be no evidence of sophistication in these beers, but a smaller amount of free acid and albuminoids would make them more desirable. They are free from salt, bicarbonate of soda, and other adulterants, with the exception of salicylic acid in three cases, in two of which the amount was quite large. The addition of this preservative is probably more frequent in the summer months, and would be detected in more brands at that time.

MILKS.

To gain some knowledge of the quality of the milk supply of the city a number of samples were purchased in March over the counter or from the cart, without the knowledge of the seller that the samples were for analysis. The results of this examination were as follows:

No.	Dairies and milk routes.	Specific gravity.	Solids.	Solids not fat.	Fat.
508	First street, between Pennsylvania avenue and B street, northwest, small grocery	1.0288	13.54	8.93	4.61
515	Wise's	1.0334	11.38	7.67	3.71
516	Fairfax dairy	1.0341	11.68	7.88	3.80
528	Alpha dairy, 811 North Capitol street	1.9308	12.45	8.48	3.97
529	Small grocery, Four-and-a-half street, between Pennsylvania avenue and C street	1.0297	11.53	8.14	3.39
530	Fort Baker dairy, Third street and Indiana avenue	1.0320	11.79	8.73	3.06
531	Russell's dairy, Third and C streets	1.0296	10.71	7.43	3.28
538	Excelsior dairy, 1757 Pennsylvania avenue	1.0292	11.46	8 08	3.38
539	Thompson's dairy, 511 Four-and-a-half street, southwest	1.0311	12.47	8.59	3.88
540	Floral Hill dairy	1.0270	9.87	7.33	2.54
541	F. K. Ward's wagon	1.0343	11.39	8.31	3.08
	Average	.....	11.66	8.15	3.51

Good milk should contain 13 per cent. of solids, and at least 4 per cent. of fat so that it is plain that our milk supply is not the best. It is due more largely to the character of our cattle and feed than anything else, in all probability.

Other substances which have been examined include bread, baking powder, of which a large amount of inferior and bad is sold, maple sirup, fertilizers, ground bone, tea, whisky, vinegar, hair-wash, cosmetics, mineral waters, minerals, urine, brick, stone, wine, etc.

It will be seen that the work of the office is of a most varied nature and requires apparatus of all forms, to keep which in working order and repair must necessarily require a considerable appropriation, which is asked for, and, if the amount of work continues to increase in the same proportion as in past years, more assistance in the laboratory.

Respectfully submitted.

CLIFFORD RICHARDSON,
Inspector of Asphalt and Cements, and Chemist.

The ENGINEER COMMISSIONER, ETC.

REPORT OF THE INSPECTOR OF GAS AND METERS.

OFFICE OF THE U. S. INSPECTOR OF GAS AND METERS,
Washington, D. C., August 14, 1889.

SIR: I have the honor herewith to submit the annual report of this office, showing its operation for the fiscal year ending June 30, 1889.

At its commencement will be found condensed tables giving the illuminating power and purity of the gas furnished by the gas companies during the year.

Full monthly statements will be found in Tables A and B. In the remaining tables, lettered C, D, E, and F, the monthly inspection of meters and the pressure of the gas are fully stated.

Very respectfully,

S. CALVERT FORD,
Inspector of Gas and Meters.

The ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA.

ILLUMINATING POWER AND PURITY.

The illuminating power and purity of the gas supplied by the Washington Gas-Light Company from June 24, 1888, to June 23, 1889, were as follows:

Average illuminating power during the year	candles..	17.32
Highest illuminating power during the year	do....	20.39
Lowest illuminating power during the year	do....	16.01

On September 24, 1888, the highest candle-power was found.

On May 23, 1888, the lowest candle-power was found.

Average quantity of ammonia in 100 cubic feet during the year	grains..	1.31
Highest quantity of ammonia in 100 cubic feet during the year	do....	4.59
Lowest quantity of ammonia in 100 cubic feet during the year	do....	.17

On March 15, 1889, the highest quantity of ammonia was found.

On three occasions, namely, October 11, December 6, 1888, and March 26, 1889, only .17 grains of ammonia were found.

Average quantity of sulphur in 100 cubic feet during the year	grains..	10.49
Highest quantity of sulphur in 100 cubic feet during the year	do....	23.66
Lowest quantity of sulphur 100 cubic feet during the year	do....	4.79

On August 8, 1888, the highest quantity of sulphur was found.

On two occasions, namely, March 20 and April 18, 1889, only 4.79 grains of sulphur were found.

DEFAULTS DURING THE YEAR.

On five occasions the gas furnished by the Washington Gas-Light Company contained more sulphur than the 20 grains allowed.

GAS PRESSURE.

The pressure of the gas furnished by this company, as recorded in inspector's office, Post building, corner Tenth and D streets, northwest, during the hours that street lamps were lighted, from July 1, 1888, to June 30, 1889, was as follows:

Average pressure	inches..	1.24
Highest pressure	do....	2.44
Lowest pressure	do....	.69

On December 29, 1888, the highest pressure was recorded.

On March 1, 1889, the lowest pressure was recorded.

The illuminating power and purity of the gas supplied by the Georgetown Gas-Light Company from June 24, 1888, to June 23, 1889, were as follows:

Average illuminating power during the year	candles..	17.09
Highest illuminating power during the year	do....	19.78
Lowest illuminating power during the year	do....	11.36

On October 3, 1888, the highest candle power was found.
On August 1, 1888, the lowest candle power was found.

Average quantity of ammonia in 100 cubic feet during the year	grains..	2.53
Highest quantity of ammonia in 100 cubic feet during the year	do ...	9.06
Lowest quantity of ammonia in 100 cubic feet during the year	do ...	.11

On September 19, 1888, the highest quantity of ammonia was found.
On December 19, 1888, the lowest quantity of ammonia was found.

Average quantity of sulphur in 100 cubic feet during the year	grains..	15.29
Highest quantity of sulphur in 100 cubic feet during the year	do . .	48.62
Lowest quantity of sulphur in 100 cubic feet during the year	do ...	7.49

On December 12, 1888, the highest quantity of sulphur was found.
On November 16, 1888, the lowest quantity of sulphur was found.

DEFAULTS DURING THE YEAR.

On thirteen occasions the illuminating power of the gas furnished by the Georgetown Gas-Light Company was found to be less than sixteen candles.

On fifteen occasions the quantity of ammonia found exceeded the five grains allowed.

On sixteen occasions the quantity of sulphur found exceeded the twenty grains allowed.

GAS PRESSURE.

The pressure of the gas furnished by this company as recorded in inspector's office, 1342 Thirty-second street, Georgetown, during the hours that street lamps were lighted, from July 1, 1888, to June 30, 1889, was as follows.

Average pressure	inches..	1.64
Highest pressure	do ...	3.01
Lowest pressure	do ...	1.01

On July 28, 1888, the highest pressure was recorded.
On May 26, 1889, the lowest pressure was recorded.

INSPECTION OF METERS.

One thousand five hundred and sixty-eight meters were inspected and proved by this office during the fiscal year ending June 30, 1889.

With the exception of one meter inspected and proved for the Alexandria Gas-Light Company and one for the Annapolis Gas-Light Company, the above number was inspected and proved for the Washington and Georgetown Gas-Light Companies and for consumers of gas in Washington and Georgetown.

The results of inspection were as follows: Seventy-six registered fast, average error 4.09 per cent; 38 registered slow, average error 6.10 per cent. One thousand four hundred and forty-nine registered within the limits allowed, namely, 2 per cent. either way, and 3 did not register the gas flowing through them.

Eighty-five of the above-mentioned meters were inspected and proved on complaint; 68 were complained of by consumers of gas; 38 registered fast, average error 3.33 per cent; 7 registered slow, average error 7.61 per cent. Twenty-one registered within the limits allowed, and 2 did not register the gas flowing through them.

Seventeen were complained of by the gas companies; 6 registered fast, average error 5.57 per cent.; 6 registered slow, average error 7.21 per cent. Five registered within the limits allowed.

The sum of $784 was collected as fees for meter inspections during the year and paid to the collector of the District of Columbia to be placed to the credit of the United States and District of Columbia in equal parts.

The Washington Gas-Light Company has erected new works for the manufacture and distribution of gas for illuminating purposes on square 1025, bounded by M, N, Twelfth and Thirteenth streets southeast.

The laboratory established in the central part of the city of Washington does not receive its supply from the above-mentioned works; therefore, the inspector has no

means at his command of ascertaining the illuminating power and purity of the gas furnished from these works.

I would respectfully recommend that a laboratory be established at a suitable point in that section of the city and provided with the necessary instruments for inspection, so that an equitable determination of the illuminating power, purity, and pressure of the gas furnished by this company from its different sources of supply can be obtained.

I again renew the recommendation, made in several preceding reports, that an assistant inspector of gas and meters be appointed, and that the act of Congress regulating gas-works in this District be amended so as to require, when for any purpose whatever the heads of meters that have been inspected, proved, and sealed are removed by the gas companies, meters of this description should be classed as repaired meters, and brought to this office for re-inspection before again being placed in service.

The seal of the inspector is the evidence that the meter has been properly tested and proven as required by law. To admit the right of the companies to remove the head of a sealed meter and rectify whatever is wrong and return meter to service without re-inspection and sealing would be to render the law practically inoperative.

Report of the illuminating power and purity of the gas supplied by the Georgetown Gas-Light Company from June 24, 1888, to June 23, 1889.

Months of the year.	Number of observations.*	Illuminating power in sperm candles.			Quantity of ammonia in 100 cubic feet.			Quantity of sulphur in 100 cubic feet.		
		Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.
					Gr'ns.	*Grains.*	*Grains.*	*Gr'ns.*	*Grains.*	*Grains.*
July	24	16 29	17.63	12.63	4.35	5.66	3.40	15.27	17.68	12.47
August	26	16.45	17.69	11.36	4.09	8.50	2.07	15.00	21.46	9.48
September	26	17.30	19.58	15.01	4.47	9.06	1.39	15.44	27,24	10.51
October	26	17.15	19.78	15.98	2.70	6.30	.91	14.55	20.00	9.65
November	27	17.23	19.42	15.90	.55	.92	.34	15.06	24.32	7.49
December	24	16.63	18.11	15.12	.21	.40	.11	17.77	48.62	12.52
January	24	17.91	19.69	16.00	1.76	3.79	.51	14.62	20.74	10.75
February	26	17.28	18.82	15.32	2.29	3.71	1.30	14.44	20.04	10.66
March	23	17.36	18.70	16.21	1.36	1.98	.67	17.43	22.73	14.19
April	26	17.05	18.40	16.04	2.41	2.87	1.97	17.50	22.46	10.02
May	25	17.38	18.94	16.07	2.75	3.71	2.03	14.54	19.95	10.02
June	25	17.09	18.37	16.07	3.53	5.48	2.12	11.93	18.23	8.39
Total	302	205.12			30.47			183.55		

AVERAGE FOR THE YEAR.

Illuminating power in sperm candles:

Mean of observations *	17.09
Highest (October 3, 1888)	19.78
Lowest (August 1, 1888)	11.36

Quantity of ammonia in 100 cubic feet:

	Grains.
Mean	2.53
Highest (September 19, 1888)	9.06
Lowest (December 19, 1888)	.11

Quantity of sulphur in 100 cubic feet:

Mean	15.29
Highest (December 12, 1888)	48.62
Lowest (November 16, 1888)	7.49

REMARKS.—On thirteen occasions the illuminating power was less than sixteen candles. On fifteen occasions the quantity of ammonia found exceeded the five grains allowed. On sixteen occasions the quantity of sulphur found exceeded the twenty grains allowed.

* Each observation consists of twenty readings on the Bunsen photometer, at intervals of one minute.

Report of the illuminating power and purity of the gas supplied by the Washington Gas-Light Company from June 24, 1888, to June 23, 1889.

Months of the year.	Number of observations.*	Illuminating power in sperm candles.			Quantity of ammonia in 100 cubic feet.			Quantity of sulphur in 100 cubic feet.		
		Mean.	Highest.	Lowest.	Mean	Highest.	Lowest.	Mean.	Highest.	Lowest.
					Grns.	*Grains.*	*Grains.*	*Grns.*	*Grains.*	*Grains.*
July	24	17.30	19.58	16.23	2.13	3.91	.85	11.57	17.81	7.53
August	26	17.35	19.54	16.17	1.94	3.40	.85	11.95	23.66	8.08
September	26	17.62	19.41	16.11	1.81	3.06	.85	10.35	13.01	7.53
October	26	17.84	20.39	16.16	.54	1.02	.17	10.03	16.30	7.53
November	27	17.49	18.49	16.16	.81	1.70	.34	12.33	19.72	7.12
December	24	16.88	18.01	16.02	.93	2.21	.17	12.33	22.19	7.53
January	24	17.58	19.15	16.08	.95	1.70	.34	12.48	18.76	5.75
February	26	17.58	18.85	16.16	.93	1.70	.34	11.94	21.92	6.85
March	23	17.13	18.10	16.07	2.21	4.59	.51	8.99	15.75	4.79
April	26	17.02	18.40	16.11	.75	1.36	.17	7.58	9.59	4.79
May	25	16.89	18.73	16.01	.99	2.38	.34	8.43	15.07	5.48
June	25	17.25	18.54	16.31	1.75	3.40	.85	7.99	13.01	6.16
Total	302	207.93			15.74			125.97		

* Each observation consists of twenty readings on the Bunren photometer, at intervals of one minute.

AVERAGE FOR THE YEAR.

Illuminating power in sperm candles:
- *Mean of 302 observations 17.32
- Highest (September 24, 1888) 20.39
- Lowest (May 23, 1888) 16.01

Quantity of ammonia in 100 cubic feet: Grains.
- Mean 1.31
- Highest (March 15, 1889) 4.49
- Lowest (October 11, 1888; December 6, 1888; March 26, 1889) ..... .17

Quantity of sulphur in 100 cubic feet:
- Mean 10.49
- Highest (August 8, 1888) 23.66
- Lowest (March 20, 1889, and April 18, 1889) 4.79

REMARKS.—On five occasions the quantity of sulphur found exceeded the twenty grains allowed.

Report of meters inspected and proved for the Georgetown Gas-Light Company and for consumers of gas in Georgetown, from June 30, 1888, to June 30, 1889.

Months.	Meters tested.	New meters for company.				Repaired meters for company.					
		Total.	Slow.		Correct.	Total.	Fast.		Slow.		Correct.
			No.	Per ct.			No.	Per ct.	No.	P ct.	
July	29	.....	.....	.....	.....	29	4	3.28	2	3.13	23
August	27	.....	.....	.....	.....	26	.....	.....	1	4.66	25
September	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
October	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	30	.....	.....	.....	.....	27	3	4.29	.....	.....	24
December	12	.....	.....	.....	.....	9	.....	.....	.....	.....	9
January	39	.....	.....	.....	.....	2	1	4.50	1	5.66	.....
February	7	30	.....	.....	30	3	.....	.....	.....	.....	3
March	29	12	1	2.91	11	13	1	3.33	.....	.....	12
April	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	179	42	1	*2.91	41	109	9	*3.85	4	*4.48	96

* Each observation consists of twenty readings on the Bunsen photometer at intervals of one minute.

Months.	Consumers' meters on complaint of consumers.						Consumers' meters on complaint of company.					
	Total.	Fast.		Slow.		Correct.	Total.	Fast.		Slow.		Correct.
		No.	P. ct.	No.	P. ct.			No.	P. ct.	No.	P. ct.	
July	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
August	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
September	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
October	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
November	2	1	3.16	1	6.91	.....	1	.....	.....	.....	.....	1
December	.....	.....	.....	.....	.....	.....	3	1	16.75	.....	.....	2
January	6	4	3.33	1	3.08	1	1	1	8.70	.....	.....	.....
February	4	2	2.72	1	3.00	1	.....	.....	.....	.....	.....	.....
March	1	1	4.33	.....	.....	.....	3	2	3.93	.....	.....	1
April	1	1	2.87	.....	.....	.....	.....	.....	.....	.....	.....	.....
May	1	.....	.....	1	3.29	.....	2	1	2.72	1	6.16	.....
June	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Total	17	9	*3.28	4	*4.07	4	11	5	*8.02	1	*6.16	5

*Average per cent.

REMARKS.—During the fiscal year ending June 30, 1889, the office inspected and proved for the Georgetown Gas-Light Company and consumers of gas in Georgetown, 179 meters; of this number 23 registered fast, average er9or, 5.05 per cent.; 10 registered slow, average error 4.40 per cent.; 146 registered within the limits allowed, namely, 2 per cent. either way.

Report of meters inspected and proved for the Washington Gas-Light Company and for consumers of gas in Washington, from June 30, 1888, to June 30, 1889.

Months.	Tested.	New meters for company.						Repaired meters for company.	
		Total.	Fast.		Slow.		Correct	Total.	Correct.
			No.	Per ct.	No.	Per ct.			
July	112	107	.....	.....	5	4.53	102	3	3
August	124	116	.....	.....	3	4.42	113	7	.....
September	129	74	1	3.00	4	4.22	69	53	53
October	128	116	4	2.62	1	4.85	111	7	7
November	104	95	4	2.79	1	4.08	90	5	5
December	116	100	5	2.91	.....	.....	95	10	10
January	114	101	2	3.13	.....	.....	99	5	5
February	106	89	2	3.54	.....	.....	87	5	5
March	104	94	1	3.00	3	3.33	90	4	4
April	121	112	1	2.45	1	3.53	*109	5	5
May	134	125	1	2.41	2	2.91	122	3	3
June	95	91	2	3.10	.....	.....	89	3	3
Total	1,387	1,220	23	†2.89	20	†3.99	*1,176	110	110

Months.	Consumers' meters on complaint of consumers.						Consumers' meters on complaint of company.				
	Total.	Fast.		Slow.		Correct.	Total.	Fast.		Slow.	
		No.	Per ct.	No.	Per ct.			No.	Per ct.	No.	Per ct.
July	2	2	2.39	....	.....	.....	.....	....	.....	....	.....
August	1	....	.....	....	.....	.....	.....	....	.....	....	.....
September	2	1	3.25	....	.....	1	.....	....	.....	....	.....
October	4	1	2.65	1	.....	3	1	....	.....	1	3.12
November	3	....	.....	1	16.66	2	1	....	.....	1	11.00
December	5	3	5.30	1	13.99	1	1	....	.....	1	15.50
January	8	4	4.15	....	2.83	*2	.....	....	.....	....	.....
February	12	8	4.26	....	.....	*3	.....	....	.....	....	.....
March	5	4	3.75	....	.....	1	1	1	3.12	....	.....
April	4	2	3.39	....	.....	2	.....	....	.....	....	.....
May	4	2	3.20	....	.....	2	2	....	.....	2	3.48
June	1	1	2.75	....	.....	.....	.....	....	.....	....	.....
Total	51	29	†3.40	3	†11.16	‡17	6	1	†3.12	5	†8.27

*1 Does not register. †Average per cent. ‡2 Do not register.

REMARKS.—During the fiscal year ending June 30, 1889, this office inspected and proved for the Washington Gas-Light Company and for consumers of gas in Washington 1,387 meters; of this number 53 registered fast: average, 3.13 per cent.; 28 registered slow; average error, 7.80 per cent.; 1,303 registered within the limits allowed, namely, 2 per cent. either way, and 3 meters did not register the gas flowing through them. One meter tested for the Annapolis Gas-Light Company found to be fast; error 2.95 per cent. One meter tested for the Alexandria Gas-Light Company found to be fast; error 5.50 per cent.

REPORT OF THE SUPERINTENDENT OF THE WATER DEPARTMENT.

ENGINEER DEPARTMENT,
Washington, November 2, 1889.

MAJOR: I have the honor to submit the following report of the operations of the water department in the extension and maintenance of the distributing system for the fiscal year ending June 30, 1889:

Complaints of the scarcity of water on the higher elevations in the low-service districts have not been so frequent as they were during the previous year. All complaints have received prompt attention and all relief possible has been given.

The performance of the new Gaskill pumping engines and boilers at the U street station during the year have been satisfactory. The pressures in the high-service mains south of Boundary have been higher and more uniform than they were with the old pumping machinery.

If the stand-pipe on Sixteenth street extended is to remain in its present location it should be extended 15 feet higher to furnish the necessary supply of water to premises on the higher elevations north of Boundary and afford additional protection in case of fire to the area supplied by the stand-pipe.

The performance of the single-acting pumping engine at the Georgetown station has not been as satisfactory as could be desired owing to the water-hammer in the delivery main and its connecting branches, being transmitted by the service pipes connected therewith into premises, causing considerable annoyance to water takers in the vicinity of the pump-house and reservoir. To remedy the evil complained of the Blake duplex pumping engines at that station have been put in thorough repair and a new air pump provided and operated by one of the engines for charging the air chambers, which has materially reduced the water hammer in the delivery main, and prevents transmission of noise into premises.

The smoke-stack for the new boilers is very deficient in draught. This is due to the pump-house being located considerably below the grade of Q street. The stack should be raised 25 feet. This would improve the draught of the furnaces, and effect a considerable saving in fuel.

There are 280 street hydrants in use in Washington and Georgetown. Seven hundred and fifty-seven repairs have been made to them during the year. Many of these hydrants are nearly worn out, rendering it difficult to keep them in repair. Thirty improved street hydrants are being manufactured for the water department. The new hydrants are designed to remedy the defects in those now in use, and will effect a considerable saving in the cost of keeping them in working order.

There are now 51 horse fountains in the water service. Ninety-three repairs have been made to them during the year. A number of these fountains have been badly broken by careless drivers and repaired at the U street station. The waste pipes to nearly all the fountains were too small and defective; they have been replaced with larger ones during the past two years. A standard drinking fountain should be adopted that will fully meet the requirements of the service.

There are 1,062 fire hydrants in service. Four hundred and fifty-seven repairs have been made to them during the year. Fifty improved fire hydrants were manufactured for the water department and 45 were erected and are in service. They are more effective and satisfactory to the fire department than the McClelland hydrant, and less liable to derangement while in use.

There are 286 public pumps in the District of Columbia. Four hundred and fourteen repairs have been made to them during the year.

Forty-three new common-sense pumps have been erected in the place of old ones that were worn out and past remedy. These improved pumps are rendering efficient service; they are less expensive than the old ones and not so liable to get out of order. Considerable attention has been paid to the condition of wells and the erection of new pumps; the wells have been thoroughly cleaned, the water in them carefully analyzed by the chemist, and when the water was found fit for domestic use the wells covered with flagging and paved over with hard brick laid in cement, the pumps provided with traps, and waste pipes to sewers arranged to effectually prevent contamination of the water by surface drainage.

There are 100 old pumps in service that are nearly worn out and should be replaced with new ones; an annual appropriation of $6,000 is imperatively needed for the purchase and proper care of pumps and wells.

Considerable improvement has been made in the construction of corporation taps, fire hydrants, street hydrants, stop-valves, and stop-valve casings and covers for the water department during the past three years, which have added to the efficiency of the water service.

Tabulated statements of the operations of this department for the past fiscal year are herewith appended.

Very respectfully, your obedient servant,

H. F. HAYDEN,
Superintendent Water Department.

ENGINEER COMMISSIONER OF THE DISTRICT OF COLUMBIA.

During the year 8,727 feet of 3-inch, 6,255 feet of 4-inch, 32,130 feet of 6-inch, 2,784 feet of 10-inch, 5,614 feet of 12-inch, 5,144 feet of 20-inch, and 2,312 feet of 24-inch water-main pipe was laid.

WATER MAINS.

Location.	Street or avenue.	Streets between.	Size of pipe.	Length of main.
			Inches.	*Linear feet.*
In alley	First and Second	F and G, southwest	3	321
Do	Fifteenth and Sixteenth.	L and M, northwest	3	497
Do	First and Second	E and F, northeast	3	379
Do	Second and Third	G and Massachusetts avenue, northwest	3	266
Do	Thirteenth and Fourteenth.	G and H, northeast	3	440
Do	Sixth and Seventh	S and T, northwest	3	150
Do	Sixth and Seventh	E and G, southeast	3	295
Do	Fifteenth and Vermont avenue.	L and M, northwest	3	529
Do	Twenty-fifth and Twenty-sixth.	I and K, northwest	3	612
Do	First and New Jersey avenue.	K and L, southeast	3	288
Do	Tenth and Eleventh	South Carolina avenue and C, southeast	3	163
Do	Thirteenth and Fourteenth.	L and Massachusetts avenue, northeast	3	57
Do	Third and Fourth	A and B, northeast	3	391
Do	Ninth and Tenth	D and F, southwest	3	1,099
Covington	Ninth and Tenth	Rhode Island avenue and R, northwest	3	312
In alley	Fourth and Fifth	N and O, northwest	3	300
Do	Sixth and Seventh	Rhode Island avenue and S, northwest	3	675
Do	Thirteenth and Fourteenth.	V and W, northwest	3	261
Do	First and Third	Q and R, northwest	3	520
Do	Second and Delaware avenue.	G and H, northeast	3	148
Do	Second and Third	East Capitol and A, northeast	3	172
Do	Twenty-second and New Hampshire avenue.	M and N, northwest	3	318
Do	Sixth and Seventh	H and I, northeast	3	360
Do	Thirty-third and Thirty-fourth.	P and Q, northwest	3	174
Center	Blake street	Alley and Sixteenth, north	4	125
South side	I street	Fourth and Fifth, southeast	4	227
Center	Ivy Place	New Jersey avenue and South Capitol, southeast.	4	500
East side	Twelfth street	V and W, northwest	4	400
North side	Q street	Sixteenth and Seventeenth, northwest	4	438
Do	B street	First and New Jersey avenue, northwest.	4	563
In alley	Sixth and Seventh	S and T, northwest	4	389
North side	Maryland avenue	Twelfth and Fourteenth, northeast	4	1,570
South side	Boundary street	Eighteenth and Nineteenth, northwest	4	363
North side	G street	Ninth and Tenth, southwest	4	554
North and south side.	H street	Seventh and Eighth, southwest	4	524
Center	Wiltberger street	Sixth and Seventh, S and T, northwest	4	532
Do	Corcoran street	Seventeenth and New Hampshire avenue, northwest.	6	760
Center	Eighth street	F and G, southwest	6	297
Do	D street	Fifth and Sixth, northeast	6	264
Do	F street	Seventh and Eighth, northeast	6	380
Do	G street	Tenth and Eleventh, southeast	6	276
Do	Seventeenth street	Corcoran and R, northwest	6	265
Do	R street	Seventeenth and New Hampshire avenue, northwest.	6	583
Do	P street	Third and New Jersey avenue, northwest.	6	266
Do	Second street	H and I, northeast	6	288
Do	Tenth street	U and V, northwest	6	392
South side	D street	Eighth and Pennsylvania avenue, southeast.	6	206
Center	K street	Sixth and Seventh, southeast	6	484
Do	Sixth street	G and H, northeast	6	401
Do	L street	Twenty-sixth and Twenty-seventh, northwest.	6	346
Do	G street	Thirteenth and Maryland avenue, northeast	6	108
Do	Corcoran street	Eighteenth and Nineteenth, northwest	6	438

WATER MAINS—Continued.

Location.	Street or avenue.	Streets between.	Size of pipe.	Length of main.
			Inches.	*Linear feet.*
South side	Maryland avenue	Twelfth and Fourteenth, northeast	6	893
Center	V street	Tenth and Vermont avenue, northwest	6	363
Do	Second street	E and F, southwest	6	322
Do	Ninth street	B and C, northeast	6	565
South side	North Carolina avenue	Sixth and Seventh, southeast	6	369
Center K	K street	Ninth and Tenth, northeast	6	314
Center	Tenth street	K and Boundary, northeast	6	416
Do	H street	Second and Third, southwest	6	434
Do	Juniper street	Maple and Larch, northwest	6	377
East and west side	North Capitol street	P and Boundary	6	236
Center	Eighth street	East Capitol and A, southeast	6	348
North side	Boundary street	Ninth and Fourteenth, northeast	6	2,458
Center	Fourteenth street	Boundary and H, northeast	6	194
Do	D street	Seventh and Eighth, northeast	6	314
Do	Twenty-fifth street	H and I, northwest	6	402
West side	New Jersey avenue	K and L, northwest	6	350
Center	N street	Eleventh and Twelfth, southeast	6	156
Do	Twelfth street	South Carolina avenue and D, southeast	6	288
Do	Third street	F and K, southwest	6	1,301
East side	Seventh street	Boundary and Pomeroy	6	505
Center	Pomeroy street	Seventh and Fourth	6	1,119
Do	Sixth street	Pomeroy and College	6	715
East and west side	do	South Carolina avenue and D, southeast	6	599
North side	L street	Twenty-first and New Hampshire avenue, northwest.	6	585
North and south side.	R street	Twelfth and Thirteenth, northwest	6	665
Center	D street	First and Second, northeast	6	622
Do	Tenth street	K and Virginia avenue, southeast	6	228
Do	M street	Third and Delaware avenue, southwest	6	300
South side	T street	Fifteenth and Sixteenth, northwest	6	450
North side	Boundary	Fourteenth and Fifteenth	6	020
In alley	Boundary and Stoughton.	Fourteenth and Fifteenth, northwest	6	020
South side	P street	Eleventh and Twelfth, northwest	6	386
Center	Ninth street	B and C, southeast	6	540
East side	Fifteenth street	Gales and Rosedale	6	306
Center	Rosedale street	Fifteenth and Sixteenth	6	412
Do	F street	Ninth and Tenth, northeast	6	236
Do	Riggs street	Fifteenth and Sixteenth, R and S, northwest.	6	488
Do	Stoughton street	Fourteenth and Fifteenth	6	120
East side	New Jersey avenue	O and P, northwest	6	409
Center	D street	Eighth and Ninth, northeast	6	310
Do	Ninth street	East Capitol and A, southeast	6	350
South side	Pennsylvania avenue	Twelfth and Thirteenth, southeast	6	435
East side	Sixth street	Massachusetts avenue and B, northeast	6	342
Center	M street	Fourth and Fifth, northeast	6	328
West side	Sixth street	L and M, southwest	6	388
Center	Third street	G and H, northeast	6	420
East side	South Capitol street	M and N, southeast	6	533
West side	New Jersey avenue	Warner and R, northwest	6	246
Do	Fourteenth street	Chapin and Binney	6	1,303
Center	Binney street	Fourteenth and Fifteenth	6	670
North and south side.	M street	Twenty-second and twenty-third, northwest.	6	546
Center	Eleventh street	Anacostia Bridge and Virginia avenue, southeast.	10	1,764
Do	Virginia avenue	Eleventh and Eighth, southeast	10	1,020
South side	Virginia avenue	Eighth and Second	10	1,020
Center	H street	Second and New Jersey avenue	12	4,249
Through	Reservation 17	New Jersey avenue and South Capitol	12	4,249
Center	South Capitol street	Virginia avenue and Canal, southeast	12	817
Do	Canal street	South Capitol and Delaware avenue	12	548
North side	B street	Tenth and Fourteenth, southwest	20	4,844
West side	Fourteenth street	B, south, and Pennsylvania avenue	20	4,844
North side	U street	Seventeenth and Pump house, northwest.	20	300
West side	Fourteenth street	Pennsylvania avenue and K, northwest	24	2,312
Total				62,966

The following cast-iron water pipe was used in the erection of new fire hydrants, stop-valves and connections:

	Linear ft.
2-inch	26
4-inch	316
6-inch	959
12-inch	12
Total	1,313

Intersections laid on streets specified to be improved.

Location.	Size of pipe.	Length of main.
	In's.	*Feet.*
First and F streets, northeast	6	34
Second and F streets, northeast	6	99
Eleventh and N streets, southeast	6	28
Four-and-a-half and I streets, southwest	6	48
Four-and-a-half and K streets, southwest	6	48
Four-and-a-half and O streets, southwest	6	48
Third and G street, southwest	6	96
New Jersey avenue and Q street, northwest	6	20
Fifth and Q streets, northwest	6	20
Ninth and S streets, northwest	6	40
Eighth and T streets, northwest	6	69
Eighteenth street and New Hampshire avenue, northwest	6	48
New Hampshire avenue and R street, northwest	6	186
Twenty-second and O streets, northwest	6	88
Twenty-first and O streets, northwest	6	48
Seventh and T streets, northwest	6	50
Fifteenth street and Maryland avenue, northeast	6	175
Eighth and B streets, southwest	6	43
Twelfth and B streets, southwest	6	4
Thirteen-and-a-half and B streets southwest	6	37
Fourteenth and Chapin streets	6	96
Fourteenth and Clifton streets	6	53
Fourteenth and Welling streets	6	41
Fourteenth street and Euclid avenue	6	52
Third and E streets, northeast	6	120
Third and F streets, northeast	6	231
Fifth and C streets, northeast	6	48
G street between North Capitol and First, northeast	6	43
Third street and Massachusetts avenue, northeast	6	91
In alley between F and G, North Capitol and First	6	57
North Capitol and K streets	6	145
North Capitol and I streets	6	58
First and Pierce streets, northwest	6	30
First and M streets, northwest	6	100
New Jersey avenue and Pierce street, northwest	6	60
Madison and M streets, northwest	6	33
Madison and N streets, northwest	6	33
C and Canal streets, southwest	6	22
New York avenue and Kirby street, northwest	6	72
Second and H streets, southwest	6	77
Delaware avenue and H street, southwest	6	27
Second and D streets southwest	6	120
Second and C streets, southwest	6	36
Seventeenth and S streets, northwest	6	44
New Hampshire avenue and Seventeenth street, northwest	6	225
New Hampshire avenue and S street, northwest	6	159
Seventeenth and T streets, northwest	6	36
New Hampshire avenue and T street, northwest	6	71
New Hampshire avenue and V treet, northwest	6	244
Total		3,653

Four way branches connected to water-mains.

Location.	No.	Size.
		Inches.
In alley between Sixth and Seventh, H and I, northeast	1	3 by 3
East side Fourth street, south side I, southeast	1	4 by 4
Northeast corner Sixth and M streets, southwest	1	6 by 6
North side E street, center Third, northeast	1	6 by 6
North side C street, center Fifth, northeast	1	6 by 6
South side G street, between North Capitol and First, northeast	1	6 by 6
Center New York avenue, between First and New Jersey avenue, northwest	1	6 by 6
North side D street, center Second, southwest	1	6 by 6
South side New Hampshire avenue, center Seventeenth street, northwest	1	12 by 6
Center New Jersey avenue and H street, southeast	1	12 by 6
Center Second and H streets, southeast	1	12 by 6
Center Third street and Virginia avenue, southeast	1	12 by 6
Center Fourth street and Virginia avenue, southeast	1	12 by 6
Center Sixth street and Virginia avenue, southeast	1	12 by 6
Center Seventh street and Virginia avenue, southeast	1	12 by 6
Center South Capitol and E streets	1	12 by 6
Center South Capitol and Canal streets, southwest	1	12 by 6

Four way branches connected to water-mains—Continued.

Location.	No.	Size.
		Inches.
Center Canal street and Delaware avenue, southwest	1	12 by 6
Southwest corner Four-and-a-half street and Maine avenue, southwest	1	12 by 6
Corner South Capitol street and Virginia avenue	1	12 by 12
Center New Jersey avenue and H street, southeast	1	12 by 12
Center Eighth street and Virginia avenue, southeast	1	12 by 12
Center Fourteenth and B streets, southwest	1	20 by 6
Center Twelfth street, north side B, southwest	1	20 by 6
Center Thirteenth street, north side B, southwest	1	20 by 6
Northwest corner Fourteenth and B streets, northwest	1	20 by 6
Center Ohio avenue, west side Fourteenth street, southwest	1	20 by 6
Center D street, west side Fourteenth, southwest	1	20 by 6
Center E street, west side Fourteenth, southwest	1	20 by 6
Center Fourteenth and F streets, northwest	1	24 by 6
Center Fourteenth and I streets, northwest	1	24 by 6
Center Fourteenth and G streets, nortwest	1	24 by 6
Center Fourteenth street and New York avenue, northwest	1	24 by 6
Center Fourteenth and H streets, northwest	1	24 by 6
Center Pennsylvania avenue and Fourteenth street, northwest	1	24 by 12
Total	35	

Tees connected to water-mains.

Location.	No.	Size.
In alley between G and Massachusetts avenue, Second and Third streets, northwest	1	3 by 3
In alley between Sixth and Seventh, E and G streets, southeast	1	3 by 3
In alley between Twenty-fifth and Twenty-sixth, I and K streets, northwest	2	3 by 3
In alley between Thirteenth and Fourteenth, L and Massachusetts avenue, northwest	1	3 by 3
West side Ninth street between D and E, southwest	1	3 by 3
In alley between Fourth and Fifth, N and O streets, northwest	1	3 by 3
In alley between Sixth and Seventh, Rhode Island avenue and S street, northwest	2	3 by 3
In alley between Thirteenth and Fourteenth, V and W streets, northwest	1	3 by 3
In alley between Twelfth and Thirteenth, K and L streets, southeast	1	3 by 3
In alley between First and Third, Q and R streets, northwest	1	3 by 3
In alley between Twenty-second and New Hampshire avenue, M and N streets, northwest	1	3 by 3
In alley between Fifteenth and Vermont avenue, L and M streets, northwest	1	3 by 3
North side V street, center Twelfth, northwest	1	4 by 4
South side W street, center Twelfth, northwest	1	4 by 4
Southwest corner Seventh and East Capitol street, southeast	1	4 by 4
Northwest corner Seventh and East Capitol streets	1	4 by 4
South side Boundary street, center Nineteenth, northwest	1	4 by 4
East side Eighth street, center H, southwest	1	4 by 4
West side Seventh street, center H, southwest	1	4 by 4
Center Seventh street between Pennsylvania avenue and B, northwest	1	4 by 4
East side Sixteenth street, center alley, between L and M, northwest	1	4 by 3
Center G street, between First and Second, southwest	1	6 by 3
In alley between M and N, Delaware avenue and Third street, southwest	1	6 by 3
Center Second street between E and F, northwest	1	6 by 3
Center Second street, between G and Massachusetts avenue, northwest	1	6 by 3
Center H street, between Thirteenth and Fourteenth, northeast	1	6 by 3
North side G street, between Thirteenth and Maryland avenue, northeast	1	6 by 3
Center T street, between Sixth and Seventh, northwest	1	6 by 3
Center S street, between Sixth and Seventh, northwest	1	6 by 3
Center Fifteenth street, between L and M, northwest	1	6 by 3
Center Twenty-fifth street, between I and K, northwest	1	6 by 3
Center L street, between New Jersey avenue and First street, southeast	1	6 by 3
Center Tenth street, between South Carolina avenue and C, southeast	1	6 by 3
Center A street, between Third and Fourth, northeast	1	6 by 3
Center Tenth street, between E and F, southwest	1	6 by 3
South side R street, center Covington, northwest	1	6 by 3
South side B street, center Ninth street, southeast	1	6 by 3
Center Pomeroy street, west side Sixth, northwest	1	6 by 3
Center Ninth street, between D and E, southwest	1	6 by 3
Center Tenth street, between D and E, southwest	1	6 by 3
North side N street, between Fourth and Fifth, northwest	1	6 by 3
North side Rhode Island avenue, between Sixth and Seventh, northwest	1	6 by 3
Center R street, between First and Third, northwest	1	6 by 3
Center H street, between Delaware avenue and Second, northeast	1	6 by 3
Center A street, between Second and Third, northeast	1	6 by 3
Center I street, between Sixth and Seventh, northeast	1	6 by 3
Center Q street, between Thirty-third and Thirty-fourth, northwest	1	6 by 3
East side Fourth street, south side I, southeast	1	6 by 4
West side New Jersey avenue, center Ivy place, southeast	1	6 by 4
Center Arthur Place, north side B street, northwest	1	6 by 4

Tees connected to water mains—Continued.

Location.	No.	Size.
West side Thirteenth street, center Maryland avenue, northeast	1	6 by 4
East side Twelfth street, center Maryland avenue, northeast	1	6 by 4
Center Stoughton street, between Fourteenth and Fifteenth, northwest	1	6 by 4
South side Boundary street, center Nineteenth, northwest	1	6 by 4
Center Seventh street, between Pomeroy and Boundary, northwest	1	6 by 4
Center Stoughton street, between Fourteenth and Fifteenth, northwest	1	6 by 4
South side G street, between North Capitol and First, northeast	1	6 by 4
Center I street, between North Capitol and First, northeast	1	6 by 4
South side B street, center Sixth, southwest	1	6 by 4
North side Pennsylvania avenue, between Twelfth and Thirteenth, southeast	1	6 by 4
Northeast corner Seventeenth and N streets, northwest	1	6 by 4
Center T and Wiltberger streets, northwest	1	6 by 4
Center S and Wiltberger streets, northwest	1	6 by 4
West side Eighteenth street, between L and M, northwest	1	6 by 4
South side K street, between Seventeenth and Eighteenth, northwest	1	6 by 4
North side O street, center Eighth, northwest	1	6 by 4
Center Madison street, north side M, northwest	1	6 by 4
East side New Hampshire avenue, between Q and R streets, northwest	1	6 by 6
Center South Capitol and E streets	1	6 by 6
East side Second street, center F, northeast	1	6 by 6
Center F street, between North Capitol and First, northeast	1	6 by 6
Center S street, west side Ninth, northwest	1	6 by 6
Center T street, east side Eighth, northwest	1	6 by 6
East side Nineteenth street, center Corcoran, northwest	1	6 by 6
East side Twenty-second street, center O, northwest	1	6 by 6
West side Seventh street, center T, northwest	1	6 by 6
Center Fifteenth street and Bennings road, northeast	1	6 by 6
North side Boundary street, center Tenth, northeast	1	6 by 6
Center Spruce and Juniper streets (LeDroit Park)	1	6 by 6
Center Maple street, between Juniper and Larch	1	6 by 6
Center North Carolina avenue, between Sixth and Seventh streets, southeast	1	6 by 6
Center North Capitol street, north side P	1	6 by 6
Center North Capital street, south side Boundary	1	6 by 6
Center Seventh and D streets, northeast	1	6 by 6
Northwest corner New Jersey avenue and K street, northwest	1	6 by 6
Center Sixth and Pomeroy streets, northwest	1	6 by 6
Center Pomeroy street, between Sixth and Seventh, northwest	1	6 by 6
West side Fourth street, center Pomeroy, northwest	1	6 by 6
Center Twenty-first street, north side L, northwest	1	6 by 6
Southeast corner Thirteenth and R streets, northwest	1	6 by 6
Northwest corner Twelfth and R streets, northwest	1	6 by 6
West side Second street, center D, northeast	1	6 by 6
South side T street, between Fifteenth and Sixteenth, northwest	1	6 by 6
North side Boundary street, between Fourteenth and Fifteenth, northwest	1	6 by 6
North side Boundary and W streets, northwest	1	6 by 6
East side Twelfth street, center P, northwest	1	6 by 6
West side Eleventh street, center P, northwest	1	6 by 6
Center G street, between Delaware avenue and Second street, northeast	1	6 by 6
Center I street, between Sixth and Seventh, northwest	1	6 by 6
Center I street, between Ninth and Tenth, northwest	1	6 by 6
Center N street, between Ninth and Tenth, northwest	1	6 by 6
Center I street, between Thirteenth and Fourteenth, northwest	1	6 by 6
East side Seventh street, center Pomeroy, northwest	1	6 by 6
Center Sixth street, between K and L, northeast	1	6 by 6
Center Myrtle street, between North Capital and First, northeast	1	6 by 6
North side K street, between North Capital and First, northwest	1	5 by 6
East side Fifteenth street, center Rosedale	1	6 by 6
North side H street, center Tenth, northeast	1	6 by 6
North side H street, center Sixth, northeast	1	6 by 6
Northwest corner Fourteenth and Boundary, northeast	1	6 by 6
Northwest corner First and C streets, northeast	1	6 by 6
Center Seventeenth street, between R and S, northwest	1	6 by 6
Southeast corner Sixth street and Maryland avenue, northeast	1	6 by 6
Center Third street, between B and C, northwest	1	6 by 6
Northwest corner Fourth and L streets, southeast	1	6 by 6
North side G street, center Tenth, southeast	1	6 by 6
Northwest corner Twelfth and K streets, southeast	1	6 by 6
Center E street, between Ninth and Tenth, northwest	1	6 by 6
Center Fourteenth street, north side Chapin, northwest	1	6 by 6
Center Clifton street, east side Fourteenth street, northwest	1	6 by 6
Center Welling street, west side Fourteenth, northwest	1	6 by 6
Center Euclid avenue, west side Fourteenth, northwest	1	6 by 6
Center Roanoke street, east side Fourteenth, northwest	1	6 by 6
East side New Jersey avenue, center of O street, northwest	1	6 by 6
Center G street, between Sixth and Seventh, northwest	1	6 by 6
Center H street, between Sixth and Seventh, northwest	1	6 by 6
North side E street, center Six-and-a-half, southwest	1	6 by 6
North side G street, center Nineteenth, northwest	1	6 by 6
West side Sixth street, center E, northwest	1	6 by 6
Center South Capitol street, between M and N	1	6 by 6
Center Warner street, west side New Jersey avenue, northwest	1	6 by 6
Center D street, west side South Capitol, southwest	1	6 by 6
East side South Capitol street, center H, southeast	1	6 by 6

Tees connected to water mains—Continued.

Location.	No.	Size.
West side Fourteenth street, center Huntington, northwest	1	6 by 6
Southwest corner Fourteenth and Binney streets, northwest	1	6 by 6
North side Pennsylvania avenue, center Nineteenth street, northwest	1	6 by 6
North side Pennsylvania avenue, center Twentieth street, northwest	1	6 by 6
Center C street, between Twelfth and Thirteenth, northwest	1	6 by 6
West side Nineteenth street, between M and N, northwest	1	6 by 6
Center N street, east side Fifteenth, northwest	1	6 by 6
North side O street, between Sixth and Seventh, northwest	1	6 by 6
Southwest corner Sixteenth and P streets, northwest	1	6 by 6
Northeast corner Eighth and P streets, northwest	1	6 by 6
North side Massachusetts avenue, center Third street, northeast	1	6 by 6
South side G street, between North Capitol and First, northeast	1	6 by 6
South side F street, center Third, northeast	1	6 by 6
West side Third street, center F, northeast	1	6 by 6
South side K street, center North Capitol	1	6 by 6
East side New Jersey avenue, center Pierce street, northwest	1	6 by 6
Center Madison street, west side Seventeenth, northwest	1	6 by 6
Center Madison street, south side H, northwest	1	6 by 6
Center Second street, south side C, southwest	1	6 by 6
Center Seventeenth street, north side S, northwest	1	6 by 6
Center New Hampshire avenue, north side Seventeenth street, northwest	1	6 by 6
Center New Hampshire avenue, south side S street, northwest	1	6 by 6
Center New Hampshire avenue, north side S street	1	6 by 6
Center New Hampshire avenue, south side V street, northwest	1	6 by 6
Center Eleventh and O streets, southeast	2	10 by 6
Center Eleventh and N streets, southeast	2	10 by 6
Center Eleventh and M streets, southeast	2	10 by 6
Center Eleventh street and Virginia avenue, southeast	2	10 by 6
Center Tenth street and Virginia avenue, southeast	2	10 by 6
Center Ninth street and Virginia avenue, southeast	2	10 by 6
Reservation between South Capitol street and New Jersey avenue	1	12 by 6
Center Virginia avenue and I street, southeast	1	12 by 6
East side Sixth street and Virginia avenue, southeast	1	12 by 6
Center Four-and-a half street, between Pennsylvania avenue and C street, northwest	1	12 by 6
Center Twenty-second street, between M and N, northwest	1	12 by 6
Center Thirteen-and-a half street, north side B, southwest	1	20 by 6
Center C street, west side Fourteenth, southwest	1	20 by 6
At alley, west side Fourteenth, between Pennsylvania avenue and E, northwest	1	20 by 6
Center U street, between Sixteenth and Seventeenth	1	20 by 6
Center B street, west side Fourteenth, southwest	1	20 by 10
Center Eighth and B streets, southwest	1	20 by 12
Center Fourteenth and H streets, northwest	1	24 by 6
Center U street, between Sixteenth and Seventeenth, northwest	1	30 by 20
North side K street, west side Fourteenth, northwest	1	30 by 24
Total	185	

Reducers.

Location.	No.	Size.
Northwest corner Sixteenth and Q streets, northwest	1	4 by 6
Center Twelfth and W streets, northwest	1	4 by 6
Center Twelfth and V streets, northwest	1	4 by 6
East side First street, center B, northwest	1	4 by 6
North side G street, center Eighth, northwest	1	6 by 4
Center Blake street, between Fifteenth and Sixteenth, S and T, northwest	1	6 by 4
Northeast corner Seventeenth and Q streets, northwest	1	6 by 4
Reservation between South Capitol street and Virginia avenue	1	6 by 4
West side Thirteenth street, center Maryland avenue, northeast	1	6 by 4
East side Twelfth street, center Maryland avenue, northeast	1	6 by 4
West side Fourteenth street, between Pennsylvania avenue and E street, northwest	1	6 by 4
Center Fourteenth and H streets, northwest	1	6 by 4
Northwest corner New Jersey avenue and K street, northwest	1	6 by 4
Northwest corner Ninth and G streets, southwest	1	6 by 4
Southeast corner Tenth and G streets, southwest	1	6 by 4
West side Seventh street, center H, southwest	1	6 by 4
Center Eighth and H streets, southwest	1	6 by 4
North side R street, between Twelfth and Thirteenth, northwest	1	6 by 4
South side T street, between Fifteenth and Sixteenth, northwest	1	6 by 4
Center Stoughton street, between Fourteenth and Fifteenth, northwest	1	6 by 4
South side East Capitol street, center Ninth, southeast	2	6 by 4
South side M street, center Fifth, northeast	1	6 by 4
Center Pomeroy street, between Sixth and Seventh, northwest	1	6 by 3
Center Twenty-second street, between M and N, northwest	1	6 by 3
Center South Capitol street, between M and N	1	10 by 6
Southeast corner Eighth and B streets, southwest	1	12 by 6
Center Fourteenth street and Pennsylvania avenue, northwest	1	24 by 20
Total	28	

Bends.

Location.	No.	Size.
		In.
In alley between First and Second, F and G, southwest	1	3
In alley between D and E, First and Delaware avenue, southwest	1	3
In alley between Sixth and Seventh, E and G, southeast	1	3
In alley between L and M, Fifteenth and Vermont avenue, northwest	1	3
In alley between I and K, Twenty-fifth and Twenty-sixth, northwest	3	3
In alley between South Carolina avenue and C, Tenth and Eleventh, southeast	1	3
South side B street, between Third and Fourth, northeast	1	3
South side R street, center Covington, northwest	1	3
South side B street, center Ninth, southeast	1	3
In alley between K and L, Twelfth and Thirteenth southeast	1	3
Center A street, between Second and Third northeast	1	3
In alley between Second and Third, East Capito an' A northeast	1	3
In alley between Twenty-second and New Hampshire avenue, M and N, northwest	1	3
Northeast corner Twelfth and V streets northwest	1	4
Southeast corner Twelfth and W streets northwest	1	4
Northeast corner First and B streets northwest	1	4
Northwest corner New Jersey avenue and B streets, northwest	1	4
Northeast corner Twelfth street and Maryland avenue, northeast	1	4
Southeast corner Twelfth street and Maryland avenue, northeast	1	4
Northwest corner Thirteenth street and Maryland avenue	1	4
Northwest corner Seventh and East Capitol streets	1	4
Southwest corner Seventh and East Capitol streets	2	4
Northeast corner Tenth and G streets, southwest	1	4
Northwest corner Seventh and H streets, southwest	1	4
Southwest corner Seventh and H streets, southwest	1	4
Southeast corner Eighth and H streets, southwest	1	4
Northwest corner Eighth and H streets, southwest	1	4
Center Seventh street, between Boundary and Pomeroy	1	4
South side G street, between North Capitol and First, northeast	1	4
South side B street, center Sixth, southwest	1	4
Northeast corner Twenty-second street and New Hampshire avenue, northwest	1	4
East side First street, center B, northwest	1	6
East side Eighth street, center D, southeast	1	6
Southeast corner Eighth street, and Pennsylvania avenue, southeast	1	6
Northeast corner Thirteenth and F streets, northwest	1	6
Northwest corner Twelfth street and Park Place, northeast	2	6
Center New Hampshire avenue and R street, northwest	1	6
Center New Hampshire avenue and Eighteenth street, northwest	1	6
Southwest corner Thirteenth street and Maryland avenue, northeast	1	6
Center Thirteenth and B streets, southwest	1	6
Center Maple street, between Juniper and Larch	1	6
Center Fourteenth street, between Pennsylvania avenue and E street at alley, northwest	1	6
Northwest corner North Capitol and P streets, northwest	1	6
Southwest corner North Capitol and Boundary streets	1	6
Southeast corner North Capitol and Boundary streets	1	6
Northeast corner North Capitol and P streets	1	6
North side U street, between Sixteenth and Seventeenth, northwest	1	6
Southwest corner Tenth and G streets, southwest	1	6
Northwest corner Ninth and G streets, southwest	1	6
Southwest corner Sixth and D streets, southeast	1	6
Southeast corner Sixth and D streets, southeast	1	6
Northwest corner Sixth street and South Carolina avenue, southeast	1	6
Northeast corner Sixth street and South Carolina avenue, southeast	1	6
Southwest corner Twelfth and R streets, northwest	1	6
Southeast corner Sixteenth and T streets, northwest	1	6
Southwest corner Fifteenth and T streets, northwest	3	6
North side Boundary street, intersection Fifteenth and W, northwest	1	6
Southwest corner Eleventh and P streets, northwest	1	6
Southeast corner Twelfth and P streets, northwest	1	6
Center Pomeroy street, west side Fourth, northwest	1	6
Center Myrtle street, between North Capitol and First, northeast	1	6
Center Third street, between B and C, northwest	1	6
Center Fourteenth and Chapin streets, northwest	1	6
Center O street, east side New Jersey avenue, northwest	1	6
South side Pennsylvania avenue, center Twelfth street, southeast	1	6
Northeast corner Sixth and B streets, northeast	2	6
South side Massachusetts avenue, center Sixth street, northeast	1	6
Southwest corner Sixth and I streets, southwest	1	6
Northwest corner Sixth and M streets, southwest	1	6
Northeast corner Sixth and M streets, southwest	1	6
East side South Capitol street, between M and N	1	6
Northeast corner South Capitol and N streets	1	6
Northwest corner Fourteenth and Chapin streets, northwest	2	6
North side M street, between Twenty-second and Twenty-third, northwest	1	6
Southeast corner Twenty-third and M streets, northwest	1	6
North side O street, center Eighth, northwest	1	6
South side Massachusetts avenue, center Third, northeast	1	6
Center Third and F streets, northeast	2	6
Center North Capitol and K streets	1	6
Center M street, west side First, northwest		

Bends—Continued.

Location.	No.	Size.
		In.
Center Second street, between C and Canal, southwest	1	6
Center Fourth street and Virginia avenue, southeast	2	6
North side O street, between Sixteenth and Seventeenth, northwest	2	6
Intersection Eleventh street and Virginia avenue, southeast	1	10
Center B street, west side Fourteenth, northwest	1	10
Center Fourteenth and B streets, southwest	1	20
Northwest corner Fourteenth and B streets, southwest	1	20
Center Seventeenth and U streets, northwest	2	20
Total	100	

STOP-VALVES.

Thirteen stop valves have been changed to new grade. Sixty-one repairs have been made to stop-valves.

Stop valves connected to water mains, and enclosed with cast-iron casings and covers over them.

Location.	No.	Size.	Way.
		In.	
North side G street, between First and Second, center alley, southwest	1	3	2
In alley between M and N, Delaware avenue and Second, southwest	1	3	2
Center Second street, between G and Massachusetts avenue, northwest	1	3	2
South curb line H street, between Thirteenth and Fourteenth, northeast	1	3	2
South side S street, between Sixth and Seventh, northwest	1	3	2
In alley between D and E, First and Delaware avenue, southwest	1	3	2
East side Fifteenth street, between L and M, northwest	1	3	2
West side Twenty-fifth street, between I and K, northwest	1	3	2
North side L street, between First and New Jersey avenue, southeast	1	3	2
At alley north side A street, between Third and Fourth, northeast	1	3	2
South side B street, between Third and Fourth, northeast	1	3	2
At alley west side Ninth street, between E and F, southwest	1	3	2
Center Tenth street, between E and F, southwest	1	3	2
South side R street, center Covington, northwest	1	3	2
South side Pomeroy street, west side Sixth, northwest	1	3	2
East side Tenth street, between D and E, southwest	1	3	2
West side Ninth street, between D and E southwest	1	3	2
Southwest corner Fifteenth street and Massachusetts avenue, northwest	1	3	2
North side N street, between Fourth and Fifth, northwest	1	3	2
North side Rhode Island avenue, between Sixth and Seventh, northwest	1	3	2
In alley between K and L, and Twelfth and Thirteenth streets, southeast	1	3	2
South side H street, between Delaware avenue and Second, northeast	1	3	2
Center A street, between Second and Third, northeast	1	3	2
South side I street, between Sixth and Seventh, northeast	1	3	2
East side Fourth street, south side I, southeast	1	4	2
West side New Jersey avenue, center Ivy Place, southeast	1	4	2
East side Sixteenth street, between L and M, northwest	1	3	2
Northeast corner B street and Arthur Place, northwest	1	4	2
South side T street, between Sixth and Seventh, northwest	1	4	2
At alley Fourteenth street, between Pennsylvania avenue and E street, northwest	1	4	2
Center Fourteenth and H streets, northwest	1	4	2
Northwest corner Seventh and East Capitol streets	1	4	2
Southwest corner Seventh and East Capitol streets	1	4	2
West side Nineteenth street, south side Boundary, northwest	1	4	2
South side Boundary street, between Eighteenth and Nineteenth, northwest	1	4	2
Center Pomeroy street, between Sixth and Seventh	1	4	2
North side R street, between Twelfth and Thirteenth, northwest	1	4	2
South side T street, between Fifteenth and Sixteenth, northwest	1	4	2
Center Boundary street, between Fourteenth and Fifteenth, northwest	1	4	2
Center Seventh street, between Pennsylvania avenue and B street, northwest	1	4	2
Southwest corner Sixth and B streets, southwest	1	4	2
North side S street, between Sixth and Seventh, northwest	1	4	2
South side T street, between Sixth and Seventh, northwest	1	4	2
East side New Hampshire avenue, center Corcoran street, northwest	1	6	2
Center Seventh and F streets, northeast	1	6	4
Center New Jersey avenue and H street, southeast	2	6	2
Center Second and H streets, southeast	2	6	2
Center Third street and Virginia avenue, southeast	2	6	2
Center Fourth street and Virginia avenue, southeast	2	6	2
Center I street and Virginia avenue, southeast	1	6	2
Center Sixth street and Virginia avenue, southeast	2	6	2
East building line Sixth street and Virginia avenue, southeast	1	6	2
Center Seventh street and Virginia avenue, southeast	2	6	2

Stop valves connected to water mains, etc.—Continued.

Location.	No.	Size.	Way.
		In.	
Center South Capitol and E streets	3	6	2
Center South Capitol and Canal streets, southwest	2	6	2
Center Delaware avenue and Canal street, southwest	2	6	2
Center Eleventh and O streets, southeast	2	6	2
Center Eleventh and N streets, southeast	2	6	2
Center Eleventh and M streets, southeast	2	6	2
Southeast corner Four-and-a-half street and Maine avenue, southwest	1	6	2
Center Eleventh street and Virginia avenue, southeast	2	6	2
Center Tenth street and Virginia avenue, southeast	2	6	2
Center Ninth street and Virginia avenue, southeast	2	6	2
East side Nineteenth street, center Corcoran, northwest	1	6	2
Center Twelfth street and Maryland avenue, northeast	1	6	4
Center Thirteenth street and Maryland avenue, northeast	1	6	4
Center Eighth and B streets, southwest	1	6	2
South side B street, center Thirteenth, southwest	1	6	4
Center Thirteen-and a-half and B streets, southwest	1	6	4
Center Seventh street and North Carolina avenue, southeast	1	6	4
Center Tenth and K streets, northeast	1	6	4
Center Tenth and L streets, northeast	1	6	4
Center Second and H streets, southwest	1	6	4
Center Maple street, north side Boundary, northwest	1	6	2
Center Maple street, between Juniper and Larch, northwest	1	6	2
Center North Capitol and Boundary streets	1	6	4
Center U street, between Sixteenth and Seventeenth, northwest	1	6	2
North side Boundary street, center Twelfth, northeast	1	6	4
North side Boundary street, center Trinidad avenue, northwest	1	6	4
Center Fourteenth and Boundary streets, northeast	1	6	4
East side Seventh street, center D, northeast	1	6	2
Center Twenty-fifth and H streets, northwest	1	6	4
Center Third and I streets, southwest	1	6	4
Center Third and K streets, southwest	1	6	4
Center Sixth and Trumbull streets, northwest	1	6	4
Center Sixth and Pomeroy streets, northwest	1	6	2
Center Seventh street, between Boundary and Pomeroy, northwest	1	6	2
East side Seventh street, center Pomeroy, northwest	1	6	2
Northwest corner Twenty-first and L streets, northwest	1	6	4
Northeast corner New Hampshire avenue and L street, northwest	1	6	2
Southeast corner Thirteenth and R streets, northwest	1	6	2
West side Second street, center D, northeast	1	6	2
Southwest corner Nineteenth and N streets, northwest	1	6	2
Center alley south side Stoughton street, northwest	1	6	2
Center Boundary street and New Hampshire avenue, northwest	1	6	4
East side Seventeenth street, between R and S, northwest	1	6	2
Center Four-and-a-half street, between Pennsylvania avenue and C street, northwest	1	6	2
North side O street, east side New Jersey avenue, northwest	1	6	2
South side East Capitol street, center Ninth	1	6	4
South side Pennsylvania avenue, center Twelfth street, southeast	1	6	4
Center Fifth and M streets, northeast	1	6	4
Center Fourth and M streets, northeast	1	6	4
Northeast corner Sixth and M streets, southwest	1	6	2
Northwest corner Fourteenth and Chapin streets, northwest	1	6	2
Northwest corner Fourteenth and Euclid streets, northwest	1	6	2
West side Fourteenth street, center Binney, northwest	1	6	4
Center Third and F streets, northeast	1	6	4
South side Massachusetts avenue, center Third street, northeast	1	6	4
Center Seventeenth street and New Hampshire avenue, northwest	1	6	5
Center New Hampshire avenue and S street, northwest	1	6	5
Center New Hampshire avenue and V street, northwest	1	6	5
Center Eleventh street at Anacostia bridge, southeast	1	10	2
Center Eighth street and Virginia avenue, southeast	2	10	2
Center B street, west side Fourteenth, northwest	1	10	2
Intersection Virginia avenue and South Capitol street, southeast	1	12	2
Center Fourth street and Virginia avenue, southeast	1	12	2
Center Eighth street and Virginia avenue, southeast	2	12	2
South side H street, center Four-and-a-half, southwest	1	12	2
West side Tenth street, center B, southwest	1	20	2
West side Fourteenth street, between B north and B south	1	20	2
Center Fourteenth street and Pennsylvania avenue, northwest	1	20	2
Center U street, between Sixteenth and Seventeenth, northwest	1	20	2
North side Pennsylvania avenue, west side Fourteenth, northwest	1	24	2
South side K street, west side Fourteenth, northwest	1	24	2
Total	142		

The following stop-valves have been inclosed with brick walls and cast-iron casings above them: Southeast corner Four-and-a-half street and Maine avenue, southwest; center New Jersey and New York avenue, northwest; center Fifth street and

New York avenue, northwest; center Sixth street and New York avenue, northwest; center Fourteenth street and Pennsylvania avenue, northwest; north side Pennsylvania avenue, west side Fourteenth street, northwest; north side K street, west side Fourteenth, northwest; center B street, west side Fourteenth northwest; center U street, between Sixteenth and Seventeenth, northwest; center Four-and-a-half street, between Pennsylvania avenue and C street, northwest.

The following water-mains were lowered during the year, viz:

Water-mains lowered.

Street or avenue.	Streets between.	Size of pipe.	Length of main.
		Inches.	*Lin. ft.*
F street	Twenty-fourth and Twenty-fifth, northwest	2	525
In alley	H and I, New Jersey avenue and Second, northwest	3	110
Prospect avenue	Thirty-third and Thirty-fifth, northwest	4	675
Chapin street	Fourteenth and Fifteenth, northwest	4	760
Boundary street	New Jersey avenue and fifth, northwest	4	36
Stoughton street	Fourteenth and Fifteenth, northwest	4	432
Park Place	B and C, Eleventh and Twelfth, northeast	6	40
C street	Twelfth and Thirteen-and-a-half, southwest	6	485
Twelfth street	R and S, northwest	6	375
Boundary street	New Jersey avenue and Fifth, northwest	12	200
Seventeenth street	T and U, northwest	20	36
Total			3,674

Service pipes lowered.

Street or avenue.	Streets between.	Length of service.
		Lin. ft.
C street	Twelfth and Thirteen-and-a-half, southwest	825
Corcoran street	Fifteenth and Sixteenth, northwest	195
Prospect avenue	Thirty-third and Thirty-fifth, northwest	3,100
Boundary street	Fifth and New Jersey avenue, northwest	98
F street	Twenty-fourth and Twenty-fifth, northwest	505
Twelfth street	R and S, northwest	18
Thirty-third street	P and Q, northwest	420
In alley	Sixth and Seventh, E and F, northwest	50
Fifth street	Boundary and S, northwest	100
Seventh street	G and Virginia avenue, southeast	530
Chapin street	Fourteenth and Fifteenth, northwest	390
Stoughton street	Fourteenth and Fifteenth, northwest	200
Total		6,431

Three hundred and fifty-one service boxes and street-washers were changed to new grade, as follows:

Corcoran street, between Fifteenth and Sixteenth, northwest	13
Sixth street, between E and G, southeast	31
Stoughton street, between Fourteenth and Fifteenth, northwest	9
Seventh street, between D and G, southeast	18
Eleventh street, between G and I, southeast	19
Seventh street, between B and F, northeast	17
Massachusetts avenue, between Sixth and Seventh streets, northeast	17
Fifth street, between O and R, northwest	37
E street, between Sixth and Seventh, northeast	17
Eighth street, between East Capitol and Massachusetts avenue, northeast	17
Seventh street, between G and I, southeast	18
L street, between Third and Four-and-a-half, southwest	10
Four-and-a-half street, between H and N, southwest	56
Tenth street, between K and I, northwest	23
Twelfth street, between F and G, northwest	16
F street, between Eleventh and Twelfth, northeast	4
O street, between Tenth and Thirteenth, northwest	30
H street, between Tenth and Eleventh, northwest	6
I street, between Sixth and Seventh, northeast	3
Total	351

STREET HYDRANTS.

Two hydrants have been erected in new locations; four have been erected in place of old ones; two have been removed and abandoned; nine have been moved to the line of the new curb. Seven hundred and fifty-seven repairs have been made to hydrants.

Hydrants erected in new location.—Corner Twelfth and D streets, southwest; in alley between Sixth and Seventh, L and M streets, northwest.

Hydrants erected in place of old ones.—Corner Twelfth and U streets, northwest; corner Thirty-fifth and Canal streets, northwest; corner Twenty-fifth and K streets, northwest; corner Fifth and Q streets, northwest.

Hydrants abandoned.—Corner Thirty-second and Q streets, northwest; corner Six-and-a-half and E streets, southwest.

Hydrants moved to new curb line.—Corner Seventh and I streets, southwest; corner Eleventh and N streets, southeast; G street, between Second and Third, southwest; corner Thirty-second and O streets, northwest; corner Twelfth and R streets, northwest; corner Eleventh street and Virginia avenue, southeast; corner Eleventh and I streets, southeast; corner Fifth and Q streets, northwest; corner Seventh street and Virginia avenue, southeast; moved hydrant from Virginia avenue, between South Capitol and First streets, and erected it at the corner of Delaware avenue and E street, southwest.

FOUNTAINS.

Two new fountains presented by the Humane Society were erected by the water department One has been moved to the new curb line. Ninety-three repairs have been made to fountains.

New fountains.—Corner Nineteenth and Boundary streets, northwest; corner Eighteenth street and Pennsylvania avenue, northwest.

Fountains moved to new curb line.—Fourteenth street extended; moved fountain from the north side of New York avenue, near Seventh street, and erected it on the north side of K street, near Seventh, northwest.

FIRE HYDRANTS.

Forty-four improved fire hydrants have been erected in new locations; one McClelland fire hydrant was erected in new location; three in the place of old ones; two have been changed to the new grade; thirteen have been moved to new curb line. Four hundred and fifty-seven repairs have been made to fire hydrants.

New fire hydrants erected.—Southwest corner Four-and-a-half street and Maine avenue, southwest; north side G street, between North Capitol and First, northeast; southeast corner Delaware avenue and G street, northeast; south side I street, between Sixth and Seventh, northwest; northwest corner Fourth and Pomeroy streets, northwest; northwest corner Sixth and Pomeroy streets, northwest; south side I street, between Ninth and Tenth, northwest; south side N street, between Ninth and Tenth, northwest; south side I street, between Thirteenth and Fourteenth streets, northwest; northeast corner Sixth and K streets, northeast; north side Myrtle street, between North Capitol and First, northeast; north side I street, between North Capitol and First, northeast; north side K street, between North Capitol and First, northwest; northwest corner Tenth and H streets, northeast; northwest corner Sixth and H streets, northeast; northwest corner Fourteenth and Boundary streets, northeast; northwest corner First and C streets, northeast; southeast corner Sixth street and Maryland avenue, northeast; east side Third street, between B and C, northwest; east side Four-and-a-half street, between Pennsylvania avenue and C, northwest; northwest corner Fourth and L streets, southeast; northwest corner Tenth and G streets, southeast; northwest corner Twelfth and K streets, southeast; north side Pennsylvania avenue, beteween Twelfth and Thirteenth, southeast; south side E street, between Ninth and Tenth, northwest; north side G street, between Sixth and Seventh, northwest; south side H street, between Sixth and Seventh northwest; northwest corner Six-and-a-half and E streets, southwest; northwest corner Nineteenth and G streets, northwest; northwest corner Sixth and E streets, northwest; southwest corner South Capitol and D streets, southwest; northeast corner Seventeenth and N streets, northwest; northeast corner South Capitol and H streets, southeast; west side Eighteenth street, between L and M, northwest; northwest corner Nineteenth street and Pennsylvania avenue, northwest; northwest corner Twentieth street and Pennsylvania avenue, northwest; southwest corner Fourteenth and Binney streets, northwest; south side K street, between Seventeenth and Eighteenth, northwest; west side Nineteenth street, between M and N, northwest; northeast corner Fifteenth and N streets, northwest; north side O street, between Sixteenth and Seventeenth northwest; southwest corner Sixteenth and P streets, northwest; north-

west corner Eighth and O streets, northwest; northeast corner Eighth and P streets, northwest; northwest corner Seventeenth and Madison streets, northwest.

Erected in place of old ones.—Southeast corner Thirteenth and F streets, northwest; northeast corner Eleventh and F streets, northwest (improved); south side North Carolina avenue, between Sixth and Seventh streets, southeast (in front engine house).

Changed to new grade.—Southwest corner Third street and Virginia avenue, southeast; northwest corner Twelfth and H streets, northwest.

Moved to new curb line.—Northeast corner Thirteenth and B streets, northeast; northeast corner Seventh and I streets, southwest; northeast corner Third and G streets, southwest; intersection New York avenue and Boundary, northeast; northwest corner Eleventh and N streets, southeast; southwest corner Third and L streets, southwest; northwest corner Thirty-third street and Prospect avenue, northwest; northwest corner Thirty-fourth street and Prospect avenue, northwest; northeast corner Thirty-sixth street and Prospect avenue, northwest; north side Stoughton street, between Fourteenth and Fifteenth, northwest; northwest corner Thirty-third and Q streets, northwest; northwest corner Thirty-third and R streets, northwest; northwest corner Seventh and I streets, northeast.

Moved from one location to another.—Southwest corner Twelfth and K streets, northwest, and erected on the northwest corner Fourteenth and Corcoran, northwest; northwest corner Thirteenth and B streets, northwest, and erected on the south side of Louisiana avenue, between Ninth and Tenth, northwest; northwest corner Four-and-a-half and P streets, southwest, and erected on the southwest corner Four-and-a-half and P, southwest; south side North Carolina avenue, between Sixth and Seventh streets, southeast, and erected on the north side of Stoughton, between Fourteenth and Fifteenth, northwest; east side Seventh street extended, northwest, and erected on the northeast corner Seventh and Pomeroy, northwest; northeast corner Eleventh and F, northwest, and erected on the north side C, between Twelfth and Thirteenth, northwest.

PUMPS.

Forty-three new pumps have been erected in place of old ones. Eleven have been removed; wells abandoned and covered with flagging. One has been removed to new curb line. Forty-seven wells have been cleaned. Four hundred and fourteen repairs have been made to pumps.

Erected in place of old ones.—Corner of Third and D streets, southwest; Fifth street, between I and K, northwest; corner of Fifth and I streets, northwest; Sixth street, between A and B, northeast; Seventh street road and Whitney avenue; corner Fourth and M streets, northwest; corner Second and E streets, northeast; corner Sixteenth and Corcoran streets, northwest; I street, between Four-and-a-half and Sixth, southwest; corner Seventeenth street and Massachusetts avenue, northeast; corner Eighth and F streets, northwest; corner Seventh and I streets, southwest; corner Eighth street and Maryland avenue, northeast; corner Eighth and A streets, northeast; Tenth street, between B and C, northeast; Twenty-sixth street, between E and F, northwest; Q street, between Second and Third, northwest; corner Twelfth and C streets, southwest; corner Fourth and I streets, northeast; B street, between Twelfth and Thirteenth, southeast; corner Sixth and K streets, northwest; corner Thirty-sixth and O streets, northwest; corner New Jersey avenue and Pierce street, northwest; L street, between Sixth and Seventh streets, northwes ; corner Fifth and D streets, northeast; corner Twenty-third and G streets, northwest; corner Thirteenth street and Pennsylvania avenue, southeast; I street, between Twenty-first and Twenty-second, northwest; E street, between Eighth and Ninth northeast; B street, between First and Second, southwest; E street, between Twelfth and Thirteenth, southeast; corner Sixth and B streets, southeast; corner Eighth and I streets, southeast; corner Third street and South Carolina avenue, southeast; corner Fifteenth and K streets, southeast; corner Eleventh and F streets, southwest; Eleventh street, between G and I, southeast; Seventh street, between B and C, southeast; corner Seventh street and Virginia avenue, southwest; corner Second and I streets, southeast; corner Third street and Pennsylvania avenue, southeast; New York avenue, between Sixth and Seventh streets, northwest; T street, Hillsdale; corner Sixth and H streets, northwest.

Pumps removed and wells abandoned.—Pennsylvania avenue, between Twenty-third and Twenty-fourth streets, northwest; corner Fourteenth and P streets, northwest; corner Sixth street and Massachusetts avenue, northwest; South Carolina avenue, between Sixth and Seventh streets, southeast; corner Third and Massachusetts avenue, northwest; corner Four-and-a-half and P streets, southwest; Four-and-a-half street, between N and O, southwest; corner Twelfth and D streets, southwest; Seventh street, between G and I, southeast; Thirty-second street extended; corner Third and L streets, southwest.

Moved to line of new curb.—Eleventh street, between N and O, southeast.

WELLS.

Wells cleaned out.—Corner Third and D streets, southwest; Fifth street, between I and K, northwest; corner Fifth and I streets, northwest; corner Sixth and H streets, northwest; C street, between First and Second, northeast; corner Second and E streets, northeast; South Carolina avenue, between Sixth and Seventh streets, southeast; corner Sixth street and Massachusetts avenue, northwest; F street, between North Capitol and First, northeast; I street, between Four-and-a-half and Sixth, southwest; D street, between First and Second, northwest; corner of Seventeenth street and Massachusetts avenue, southeast; corner Eighth street and Maryland avenue, northeast; corner Eighth and F streets, northwest; corner Eighth and A streets, northeast; Tenth street, between B and C, northeast; Q street, between Second and Third, northwest; corner Fourth and I streets, northeast; corner Fifth and I streets, northwest; corner Twelfth and C streets, southwest; B street, between Thirteenth and Fourteenth, southeast; corner Twelfth and D streets, southwest; corner Ninth and I streets, northwest; Seventh Street road and Whitney avenue; corner New Jersey avenue and Pierce street northwest; L street between Sixth and Seventh, northwest; corner Sixth and A streets, southeast; corner Twenty-third and G streets, northwest; I street, between Twenty-first and Twenty-second, northwest; B street, between First and Second southwest; E street, between Eighth and Ninth, northeast; Four-and-a-half street, between N and O, southwest; corner Fifteenth and K streets, southeast; corner Sixth and B streets, southeast; corner Eighth and I streets, southeast; corner Third street and South Carolina avenue, southeast; corner Eleventh and F streets, northwest; corner Four-and-a-half street and Maryland avenue, southwest; Eleventh street, between G and I, southeast; Seventh street, between B and C, southeast; corner Seventh street and Virginia avenue, southwest; corner Third street and Pennsylvania avenue, southeast; New York avenue, between Sixth and Seventh streets, northwest; corner Third and L streets, southwest; corner Four-and-a-half and M streets, southwest; corner Four-and-a-half and F streets, southwest.

TRAPS.

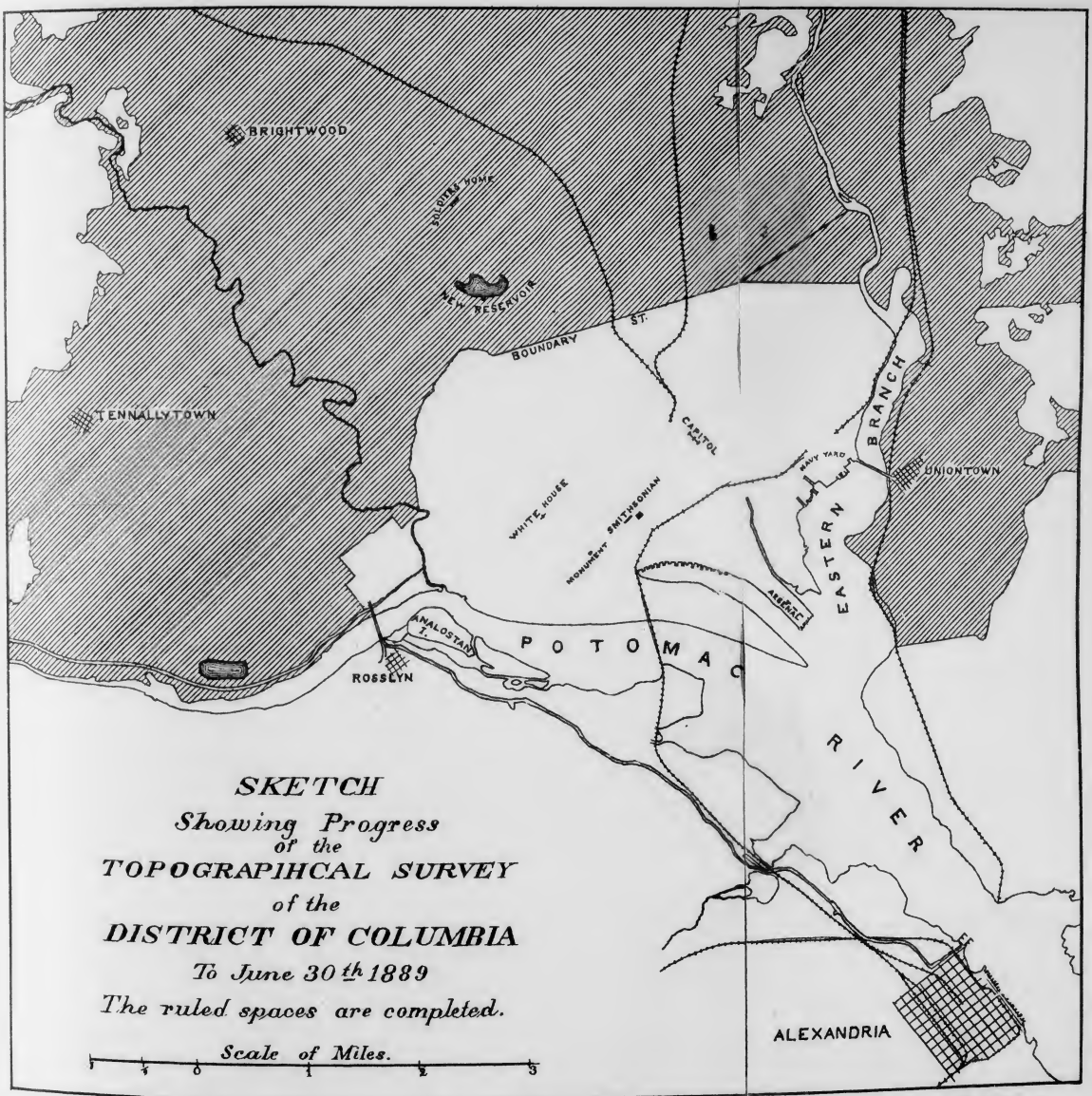
Brick traps with iron grates over them.—Corner Fifth and I streets, northwest; corner Sixth and I streets, northwest; corner Second and E streets, northeast; I street, between Four-and-a-half and Sixth, southwest; corner Third and L streets, southwest; corner Eighth and A streets, northeast; corner Eighth street and Maryland avenue, northeast; corner Twelfth and C streets, southwest; corner Eighth and I streets, southeast; corner Sixth and K streets, northwest; corner Fourth and I streets, northeast; corner Seventh and I streets, southwest; I street, between Sixth and Seventh, southwest; corner Sixth and I streets, southwest; corner Twenty-third and G streets, northwest; B street, between First and Second, southwest; corner Sixth and B streets, southeast; I, street between Twenty-first and Twenty-second, northwest; corner Third street and South Carolina avenue, southeast; corner Eleventh and F streets, southwest; Eleventh street, between G and H, southeast; corner Ninth and East Capitol streets; Seventh street, between B and C, southeast; corner Seventh street and Virginia avenue, southwest; corner Third street and Pennsylvania avenue, southeast; New York avenue, between Sixth and Seventh streets, northwest; corner Eighth and F streets, northwest; corner Sixteenth and Corcoran streets, northwest; I street, between Four-and-a-half and Sixth southwest.

REPORT OF OFFICER IN CHARGE OF THE SURVEY OF DISTRICT OF COLUMBIA.

U. S. COAST AND GEODETIC SURVEY OFFICE,
Washington, D. C., September 16, 1889.

DEAR SIR: The reports of Assistants D. B. Wainwright and W. C. Hodgkins, and of J. A. Flemer Aid, chiefs of parties engaged in the survey of the District of Columbia, for the fiscal year ending June 30, 1889, are received, and I have the honor, in accordance with the direction of the Superintendent, to communicate the results, as follows:

	1887-'88.	1888-'89.
Sheets photolithographed	19	21
Sheets of field-work completed	8	9
Sheets of field-work partially completed	21	22
Sheets not commenced	12	8
Total	60	60


BRIGHTWOOD
TENNALLYTOWN
FOUNDRY BRANCH
NEW RESERVOIR
BOUNDARY
ST.
CAPITOL
WHITE HOUSE
MONUMENT
SMITHSONIAN
NAVY YARD
EASTERN BRANCH
UNIONTOWN
ARSENAL
ANALOSTAN I.
POTOMAC
ROSSLYN
RIVER
ALEXANDRIA
SKETCH
Showing Progress
of the
TOPOGRAPIHCAL SURVEY
of the
DISTRICT OF COLUMBIA
To June 30th 1889
The ruled spaces are completed.
Scale of Miles.
1 ¼ 0 1 2 3

D C51 1

Permanent bench-marks established on lines of level heretofore run	48
Total cost of the same	$482.92
Stones planted on standard lines of level run since September 1, 1888	37
Bench-marks established on other permanent objects and duly described in record-books	343
Miles of standard levels run forward and backward	78
Acres of topography surveyed during the year	4,185
Cost of the topography on account of district appropriation	$8,296.28
Cost per acre of the topography, exclusive of salaries of officers from the coast and Geodetic survey	2.00
Cost per acre on account of salaries of officers	.80
Total cost per acre of topography, including officer's salaries	2.80
Days on which field-work was entirely suspended on account of rain or snow	49
Days on which topography was executed in the field	167
Days in which operations other than topography were carried on in the field	36
Legal holidays, including Sundays	51
Days from September 1, 1888, to June 30, 1889	303

Our operations have not covered as much ground as had been anticipated, but considering the great, almost unprecedented, rain-fall during the twelve months ending June 30, 1889, in which time there was entirely lost 49 out of a possible 262 working days, or very nearly one-fifth of the whole working time, to say nothing of the many days on which only half a day or less could be utilized and which fragments of lost days are not counted as lost time but entered up as whole days, because some kind and some amount of work was done in the field, I consider the amount of work that has been performed very satisfactory, and the total cost, including our officers' salaries, $2.80 per acre, very reasonable.

The parties are now in excellent condition, officers and men being in thorough practice, and I look forward to an increased amount of work during the fiscal year 1890 from this fact alone.

The publication of the small sheets of the atlas has not been pushed, as it was deemed far more advisable to get the field-work done and perfect the field records of the leveling, which form so important a part in such an operation. To provide for the requirments of the Commisioners, I have, however, had tracings made of all the original sheets, and I am now prepared to furnish blue prints of the work up to date.

The plane of reference of all the contours is the mean level of the sea. The tide rising above this involves no very important considerations so far as this particular survey is concerned, but its falling below it is a matter of much importance in its bearing on claims that have been heretofore and will be hereafter set up to such places as the so-called Kidwell Meadows; in it is also involved the boundary limits of the District on the Virginia shore of the Potomac River throughout the whole extent of the District along that stream.* On investigation I found that no attention had so far been paid to the delineation of the contour of mean low-water mark. I therefore directed the chiefs of the parties to run it out whenever they came down on the Potomac or the Anacostia Rivers, and as its delineation throughout the whole extent of the water front, especially along the Virginia shore, is a matter of the first importance, it should be provided for as a part of the topographical survey of the District. The development of this mean low-water line has already shown two shoals bare at mean low water. The one near the Baltimore and Potomac Railroad bridge over the Anacostia River is of about 1 acre, the other between that bridge and the bridge from near the navy-yard across the Anacostia River to the village of Anacostia is about 4 acres. Of this you were duly notified some weeks since by the Superintendent in a special communication.

In this connection I need hardly remind you of our various conversations upon the subject of the extension of this detailed survey to cover Alexandria County, Va., thus taking in the whole area of the original 10 miles square. The necessity of the whole of the original grant being under the control of the Federal Government was foreseen by Washington and his able assistant, Maj. Peter Charles L'Enfant. In connection with the defense of the National Capitol it is more apparent to-day than it was then; and not only does it seem to me that the United States should have the whole of the original tract surveyed, but that it should acquire it again by purchase or otherwise as a necessary part of the District of Columbia. I recommend the appropriation of $10,000 for the insurance of the completion of the whole survey of the present District, including a resurvey of the entire water front of the city, and that any balance may be applied to a similar survey to be extended over Alexandria County, Va.

The publication of this work has now become a matter of prime necessity, and I recommend that $10,000 be asked to engrave the work on copper, the full scale of the survey being adopted. The work should be so produced as to enable the contours

*United States Statutes at Large, Vol. 20, Forty-fifth Congress, 1877-'79.

alone to be printed, the improvements alone to be printed, or the wood alone to be printed. The one process of engraving will assure the whole.

Besides the map-work I would like to see an amount appropriated sufficient to make a model in plaster of the whole District, as you once suggested to me. It would be quite a large affair, would probably cost $8,000 for a single model, and would be a very useful thing to Congress and to the Commissioners, and make a most creditable exhibit at the approaching quadro-centennial.

The field-work is now so far completed as to assure the success of this model if undertaken.

Messrs. Wainwright, Hodgkins, and Flemer have carried on the work during the past fiscal year with good judgment and energy, and the progress of the work has been entirely satisfactory.

A sketch showing progress of the work to date accompanies this report.

Yours, respectfully,

B. A. COLONNA,
Assistant in Charge of Office.

The ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA.

SPECIFICATIONS FOR STANDARD PAVEMENTS AND STREET CONSTRUCTION MATERIAL.

Approximate quantities of materials to be furnished for street improvements for the year ending June 30, 1890.

6 by 20 inches granite curb	linear feet	40,000
8 by 8 inches special granite curb	do	30,000
5 by 20 inches bluestone curb	do	10,000
6 by 20 inches circular granite curb	do	2,500
8 by 8 inches circular granite curb	do	2,500
Paving bricks		3,000,000
Arch bricks		200,000
Vitrified roadway paving bricks		1,000,000
Granite paving blocks		500,000
Asphalt paving tiles		70,000
Asphalt paving blocks		300,000
Artificial stone tiles, square		12,000
Artificial stone tiles, rectangular		600
Artificial stone tiles, triangular		600

The above qualities are approximate.

TIME OF DELIVERY.

It is desired to commence the work of street improvement immediately after July 1, 1889, and as much as possible of the materials herein specified is desired with the least possible delay thereafter.

Bidders will please specify at what time they can commence the delivery, and what amount they can deliver immediately after July 1, 1889, and at what rate they can continue the delivery. The item of time will be considered of importance in awarding contracts.

PLACE OF DELIVERY.

Curb, granite paving blocks, asphalt tiles and blocks, artificial stone blocks, and vitrified roadway paving bricks will be delivered by the contractors in the property yards of the District of Columbia, or at the manufactory, if within the city. These property yards will ordinarily be situated along the lines of railroad or river front and within 500 feet thereof.

Sidewalk paving bricks and arch bricks will be required to be delivered by the contractor at the site of the work where they are to be used.

SPECIFICATIONS FOR STREET CONSTRUCTION MATERIAL.

STANDARD GRANITE CURB.

The curbing must be of good and acceptable texture and color, dressed 12 inches on the face, 3 inches on the back, and chiseled 6 inches deep on the joints, with no projections beyond the chiseled portion of the joint, the joint to be at right angles to the face and top surface; the top surface to be beveled one-quarter inch; the

face and top to be plane surfaces, without depression or other irregularities. The length must not be less than 6 feet; depth, not less than 20 inches nor more than 24 inches in any portion of a piece, and thickness 6 inches. The bed of the curb must average not less than 6 inches in width, and no excessive protuberance will be allowed on the sides.

SPECIAL 8 BY 8 INCHES GRANITE CURB.

The curbing must be of suitable and acceptable color and texture, dressed on top the full depth on the face and 3 inches deep on back. The top surface will be beveled one-fourth of an inch. The face and top to be plane surfaces, without bends, twists, depressions, cups, or other irregularities. It will be 8 inches thick, not less than 8 inches nor more than 12 inches deep, and no piece less than 6 feet long. The joint will be chiseled throughout. The bed will be rough dressed to give secure bearing.

5-INCH BLUESTONE CURB.

The curbing must be best North River bluestone, dressed 12 inches on the face and 3 inches on back, and chiseled 6 inches deep on the joints, with no projection beyond the chiseled portion of the joint, the joints to be right angles to the face and top surface. The top surface to be beveled one-quarter inch; the face and top to be plane surfaces, without bends, twists, depressions, cups, or other irregularities. The length must not be less than 4 feet, depth not less than 20 inches, and not more than 24 inches in any portion of a piece, and thickness 5 inches. Each piece must have a bed not less in area than the dressed portion of the curb, and no excessive protuberance on the sides.

CIRCULAR CURB.

Circular curb will conform in all respects to the above specifications, except that it will be cut to the required radius. It must be cut to such lengths that three pieces will make a 90-degree curve.

GRANITE PAVING BLOCKS.

The blocks may be of any syenite or granite equal in quality to what is known as Quincy granite, of uniform fine grain and texture, without lamination or stratification, and free from excess of mica or feldspar. Soft or weather-worn stones from the surface of the quarry or stones that will wear smooth under traffic will not be accepted.

The blocks must be of the following dimensions, viz: In length not more than 8 nor less than 6 inches; in width, not more than 4 nor less than 3 inches; in depth, not more than 6 nor less than 5½ inches, not more than one-fourth to be of the smaller dimension, and the average size shall be such that not more than forty shall be required to lay a square yard of pavement. They must be sufficiently dressed to present rectangular faces, with straight edges on top, bottom, and sides, and all blocks whose faces vary more than half an inch from a rectangular shape will be rejected. The sides and ends of the blocks must be so dressed that they will make close-fitting joints, and any block which has a greater projection than half an inch will be rejected.

SIDEWALK PAVING BRICK.

Sidewalk paving brick to be of dimensions 8¼ by 4 by 2¼ inches, hard burned throughout, of dark red color, without flaws or cracks, and square and true on the edges. Specimens required.

Arch bricks to be of dimensions 8¼ by 4 by 2¼ inches, hard burned throughout, sound and of true and regular shape. All to conform to the samples submitted with the proposals. No swelled brick or soft or salmon brick will be allowed. Specimens required.

The District will probably require at least 1,000,000 paving bricks within sixty days after July 1, 1889.

ASPHALT PAVING BLOCKS.

The size of the blocks will be 4 by 5 by 12 inches, and a variation of one-fourth of an inch from these dimensions will be sufficient grounds for rejecting any block. The blocks will be composed of paving cement, 11 to 15 per cent.; crushed limestone,

89 to 85 per cent., of which about 50 per cent. shall be coarser than 20 meshes to the inch. The paving cement will be an admixture of refined Trinidad asphalt with the residual oil obtained from the distillation of petroleum. No product of the distillation of coal-tar will be permitted. The right is reserved to inspect the manufacture of the blocks at any time. The blocks must be equal to any ever laid in the District and satisfactory in every respect to the Engineer Commissioner.

ASPHALT PAVING TILES.

The materials composing the tiles will be the same as for asphalt paving blocks. The tiles will be of two sizes, square 8 by 8 by 2½ inches and hexagonal 4.64 inches on the side and 8 inches between parallel sides and 2½ inches thick.

VITRIFIED ROADWAY PAVING BRICKS.

The bricks desired under this head must possess such qualities in regard to hardness, toughness, and durability as to fit them especially for use in paving streets, gutters, alleys, etc. Specimens of the bricks will be required to be submitted, and all bricks furnished must conform to the samples submitted. The bricks must be delivered and properly piled up in the property yards of the District.

SPECIFICATIONS FOR LAYING COBBLE GUTTERS AND CROSSINGS.

The cobble-stone and flagging will be furnished by the District, along the line of the work.

The materials necessary to be removed will be excavated to a depth of 12 inches below the top line of the proposed gutter or crossing when fully packed. Any objectionable or unsuitable material below the bed will be removed, and the space filled with clean sand or gravel.

All holes or inequalities will be filled to a proper level with sand or gravel well compacted by rolling or ramming. Upon the foundation thus prepared will be laid a bed of good bank gravel, 5 inches in thickness, thoroughly compacted by rolling or ramming. Upon this will be spread a layer of clean sharp sand, to serve as a bed for the paving stones, of such depth as may be required to bring the work to grade.

The cobble-stones will be assorted as they are brought upon the ground, and no stones that are less than 4 or more than 6 inches long, or less than 2 or more than 4 inches wide will be used, and the several sizes will be laid so as to make an even surface when rammed. When thus laid the stone shall be immediately covered with clean fine sand, in proper quantities, and raked until the joints become filled therewith; the stones shall then be thoroughly rammed to a firm, unyielding bed, with a uniform surface and proper grade.

The foundation for the gutter and crossing flag shall be prepared in the same manner as described for cobble, upon which the flag will be laid with close joints and settled into place solidly in such manner as not to fracture the flag. When gutters are laid without curb, selected stones of large size will be laid to line in the position and at the height that the curb would be if laid. This course will be laid true to line and grade and with especial care. Gutters will generally be 4 feet wide with 12-inch flagging in the center, as shown in cross-section.

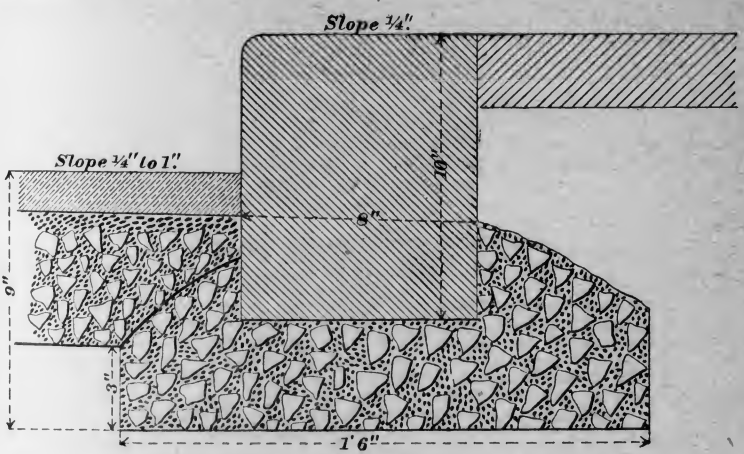
SPECIFICATIONS FOR SETTING GRANITE AND BLUESTONE CURB.

STANDARD GRANITE AND BLUESTONE CURB.

All curb will be furnished by the District at the property yard or in the streets of the city, and when necessary will be hauled at the expense of the contractor. The trench will be dug 24 inches deep and 18 inches wide, to permit a thorough ramming. A bed of gravel 4 inches deep will be laid in the bottom of the trench and thoroughly consolidated. On this bed the curb will be laid to level and grade, with close joints and even and continuous surfaces. The ditch will then be filled with gravel, the first filling to be not more than 3 inches deep, be well rammed by rammers or bars so as to give the curb a solid bearing under its entire length. Other layers will then be rammed in the ditch to within 10 inches of the top of the curb; the layers for each ramming to be not more than 4 inches deep.

SPECIAL GRANITE CURB.

The special granite curb will be laid on a foundation of hydraulic concrete, as shown by the following drawing:



On this bed the concrete foundation made as prescribed for the concrete base for standard asphalt pavements will be laid. This concrete base will be laid of such depth as to permit the granite curb (of which the depth will vary generally from 3 to 12 inches) to be placed upon it and remain at the proper grade. All space remaining between the curb and the concrete foundation will then be carefully rammed completely full with cement mortar or fine concrete suitable for the purpose. The necessary concrete will then be added to bring the foundation to the dimensions shown in the cut. The work of setting this curb will be done by competent stone masons. If so desired, the contractor will be authorized to finish the foundation in front of the curb with a layer of binder as prescribed for the intermediate course in coal-tar distillate pavements, but no extra allowance will be made for such work.

SPECIFICATIONS FOR COMBINATION CURB AND GUTTER.

A combination curb and gutter of artificial stone on concrete foundation will be laid on streets as may be ordered by the engineer commissioner. The curb, gutter, and foundation will conform with the dimensions given on drawings on file in engineer department. The concrete foundation will be composed of the same materials and will be laid in the same manner as prescribed for concrete foundations of asphalt pavements. The curb and gutter will consist of fine concrete composed of one part Portland cement, two parts clean sharp sand, and three parts clean broken stone, not more than 1 inch in their largest dimensions. The exposed surfaces of both gutter and curb will be coated 1½ inches thick with a cement composed of three parts granulated granite (the fragments being of such size as to pass through a quarter-inch screen and free from all dust) and two parts of cement.

The cement used in the manufacture of the curb and gutter must conform to the current District of Columbia specifications for slow-setting Portland cement. The work will be carried on uniformly, and the whole curb completed while in a soft and plastic state, so that it will become a homogeneous solid when set. While still plastic, the curb and gutter will be saw cut at intervals of 8 or 10 feet, as may be ordered, to allow for expansion and contraction and to give the appearance of cut stone.

Contractors may use such methods of molding the curb into shape as they may deem best fitted to the work. The curb and gutter when set must conform with the cross-section shown in drawing.

A conduit for electrical conductors, 4 inches wide and 4 inches high, will be left at the base of the curb if so ordered by the Engineer Commissioner. Hand-holes, to give access to this conduit, will be left at intervals of 50 feet, more or less, as may be ordered, all as shown on drawing. Man-holes will be constructed near each cross street in accordance with plans and specifications on file in engineer department. The exact location of each man-hole will be fixed by the Engineer Commissioner, District of Columbia. The cost of these man and hand holes, and their frames and covers,

must be included in the price per linear foot of the "combination curb and gutter with electrical conduit."

The curb and gutter must be properly protected from injury while setting, and the material used for such protection must be removed within twenty-one days from the completion of the work, if so ordered.

The contractor is required by law to guarantee all work for the period of five years from the date of the completion of the contract.

DRESSING OLD CURB.

Old curb will be dressed by the contractors for street improvements whenever ordered by the Engineer Commissioner.

Contractors will employ competent stone-cutters to do the work, and will be allowed the actual cost of the labor employed plus 15 per cent. for tools, sharpening same, and supervision. Certified pay-rolls of men employed and amount paid will be required for each street.

SPECIFICATIONS FOR LAYING SIDEWALKS.

BRICK SIDEWALKS.

Brick pavements will be laid on a foundation of gravel and sand; and the bricks will be furnished by the District, delivered on the line of the work. The space over which the pavement is to be laid will be excavated to the depth of 10 inches below the top surface of the proposed pavement, when thoroughly compacted by rolling or ramming. Any objectionable or unsuitable material below the bed will be removed, and the space filled with clean gravel or sand. Care must be taken in excavating to preserve the proper slope parallel with the surface. Upon the foundation will be laid a bed of fine sandy bank gravel, 4 inches in depth when compacted, screened from all pebbles measuring more than 1½ inches in their largest dimensions, and thoroughly rolled or rammed. Upon this will be laid a bed of fine, clean, sharp sand 4 inches in thickness, to serve as a bed for the bricks, which will be laid directly upon and imbedded in it with close joints. Special care will be observed to make the surface of this bed of sand parallel to the surface of the pavement when finished. The bricks must be laid by the pavers standing or kneeling upon the bricks already laid, and not upon the bed of sand.

The bricks are to be laid at right angles with the line of the street, or in herring-bone style, as may be directed by the Engineer Commissioner, and even with the top of the curb when rammed; each course to be of bricks of a uniform width and depth, and so laid that all longitudinal joints shall be broken by a lap of at least 2 inches. When thus laid the bricks will be immediately covered with clean, fine, dry sand, free from loam or earthy matter, and screened through a sieve or screen having not less than 20 meshes to the inch. The bricks will then be carefully rammed by placing a plank over several courses and ramming the plank with a heavy hammer. The ramming will be continued until the bricks reach a firm, unyielding bed and present a uniform surface, with proper grade and slope. Any lack of uniformity in the surface must be corrected by taking up and relaying. When the ramming is complete a sufficient amount of fine, dry sand, as above described, will be spread over the surface and swept or raked into the joints.

Rectangular spaces, 7 by 3 feet in dimensions, will be left unpaved around trees where already planted, and at intervals of 25 feet between centers adjacent to the curb on streets where trees have not been planted. When so ordered, a continuous tree space 4 feet wide will be left unpaved adjacent to the curb. Edges of brick pavements, when not abutting against the curb, will be finished with a continuous row of brick on edge.

RELAYING BRICK SIDEWALKS.

In relaying brick sidewalks the existing sidewalks will be taken up and the bricks carefully piled and preserved. The bed will then be prepared in the same manner as prescribed for new brick walks. After the bed is prepared the old brick will be cleaned of all adhering materials so that they can be relaid with close joints, when they will be laid as prescribed for new brick pavements.

SPECIFICATIONS FOR IMPROVING ROADWAYS—GRADING AND REGULATING.

FIRST CLASS—REPAIRING ROADWAYS.

The roadway will be smoothed up with the material on hand or that may be deposited on the street by the District. The crown of the road will be 8 inches for streets, 40 feet and over in width between curbs. For narrower streets the crown will be 6 inches.

SECOND CLASS—MACADAMIZING.

The roadway of the street shall be accurately cut or filled to subgrade, care being taken to observe the proper crown, as shown by the cross-sections on file in the office of the Engineer Commissioner, a copy of which will be furnished the contractor upon application. This subgrade will be 8 inches below the finished surface of the macadam roadway, 12 inches below the surface of the gutter, and 10 inches below the finished surface of the sidewalks. The whole surface, when brought to subgrade, will be thoroughly rolled with a steam or horse roller weighing not less than 5 tons, immediately before applying the macadam.

All measurements for grading will be made in place, and payments made thereon.

The macadam will consist of broken stone, laid in two courses, the first course 6 inches or more in depth, and the second 2 inches or more in depth, forming a body not less than 8 inches in thickness when thoroughly compacted. The surface of the street must be perfectly smooth and free from ruts when the macadam is applied. No mud or soft material will be allowed to mix with it. Each course of macadam material will be well wet by a sprinkler or watering cart as it is applied and thoroughly compacted by rolling with a steam-roller, weighing not less than 5 tons. The rolling will be continued until the stone ceases to sink or creep in front of it; the amount of rolling will be not less than ten hours for each 1,000 yards of surface. The District will furnish, if desired, a suitable steam-roller, for which the contractor will be charged $10 per day.

The size of the stone in the first course will be such that its largest dimensions do not exceed 2½ inches. Any stone larger than this will be rejected, and must either be removed from the street or rebroken to the proper size by the contractor. The material for the second course will be the finer stone obtained in breaking, and varying in size from one-eighth to three-quarters of an inch in their largest dimension. No stone dust will be allowed. If desired, the top course may be of river-washed gravel, similar to that on exhibit in the office of the assistant to the Engineer Commissioner in charge of highways.

The stone must be of hard, compact texture, such as blue rock (gneiss), trap, granite, flint, and the harder variety of limestone. Bidders will submit sample of stone they propose to furnish, and all stone not equaling the sample in size and quality will be rejected. Care must be taken to finish the surface of the street with the required transverse and longitudinal slope, and proper gauges and forms must be used for this purpose.

GRAVELING.

Between the edge of gutters and the outer edge of the sidewalk there will be a space of 3 feet which will be filled to a depth of 10 inches with clean bank gravel, the largest stones in which shall not be more than three-quarters of an inch in their largest dimension. This will be spread smoothly and with the proper slope towards the gutter, and thoroughly compacted by ramming or rolling until it becomes firm and solid.

Specifications for Laying Street Pavements.

STANDARD ASPHALT PAVEMENT.

The attention of bidders is invited to the clause of the appropriation bill which says: "That under appropriations contained in this act no contract shall be made for making or repairing concrete or asphalt pavement at a higher price than $2 per square yard for a quality equal to the best laid in the District prior to July 1, 1886, and with same depth of base."

Standard asphalt pavement will be 2½ inches in thickness when compacted, with a base of hydraulic cement concrete 6 inches in depth. The space over which the pavement is to be laid will be excavated to the depth of 9 inches below the top surface of the pavement when completed. Any objectionable or unsuitable material below the bed will be removed, and the space filled with clean gravel or sand well rammed. The bed will then be trimmed so as to be parallel to the surface of the pavement when completed, and the entire road-bed will be thoroughly rolled with a heavy steam-roller.

Upon this foundation will be laid a bed of hydraulic cement concrete 6 inches in thickness, to be made as follows:

One measure of hydraulic cement and two of clean, sharp, washed sand, free from clay, will be thoroughly mixed dry and made into mortar with the least possible amount of water; broken stone of acceptable dimensions and character, thoroughly cleaned from dust and dirt, drenched with water, but containing no loose water in the heap, will be incorporated immediately with the mortar in such quantities as will give a

surplus of mortar when rammed. This proportion, when ascertained, will be regulated by measure. Each batch of concrete will be thoroughly mixed, the mixing being continued on the board until each piece of stone or brick is completely coated with mortar; it will then be spread and at once thoroughly compacted by ramming until free mortar appears upon the surface. The whole operation of mixing and laying each batch will be performed as expeditiously as possible, with the use of a sufficient number of skilled men. No gravel will be used in the concrete, but only angular fragments of stone having rough faces obtained by fracture, and measuring not more than 1½ inches in their largest dimensions. The upper surface of the base will be made made parallel with the crown of the pavement to be laid, and will be suitably protected from the action of the sun and wind until set.

The cement used must conform to the current District of Columbia specifications.

The wearing surface will be composed of (1) refined Trinidad or other acceptable asphaltum; (2) heavy petroleum residuum oil; (3) fine sand, containing not more than 5 per cent. of loam or clay; (4) fine stone dust; (5) fine powder of carbonate of lime.

The asphaltum must be equal in all respects to that obtained from the Asphaltum Lake in Trinidad and be refined, and, as far as possible, freed from foreign organic and animal matter, and volatile oil, and must contain at least 60 per cent. of bituminous matter, soluble in bisulphide of carbon. The asphalt must be refined under the direction of and to the satisfaction of the Engineer Commissioner, and kettles will not be drawn lower than may be ordered by him. The residuum oil must be free from coke and other impurities of a specific gravity of from 18° to 22° Baume and withstand a fire test of 250° Fahrenheit.

The refined asphaltum and residuum oil will be mixed in the following proportions by weight with Trinidad asphalt: Asphalt, 100 parts; petroleum, from 14 to 20 parts. The proportion of mixture for other asphalts will be determined by their chemical composition.

The asphaltic cement, made in the manner above described, will be mixed with other materials in the following proportions by weight, viz: Asphaltic cement, from 13 to 16; sand, from 63 to 58; stone-dust, from 28 to 23; pulverized carbonate of lime, from 3 to 5.

The proportion of materials used will depend upon their character and the traffic on the street, and will be determined by the Engineer Commissioner. If the proportions of the mixture are varied in any manner from those specified the mixture will be condemned, its use will not be permitted, and, if already placed on the street, it will be removed and replaced by proper material at the expense of the contractor.

The mixture of sand, stone-dust, and the asphaltic cement will be heated separately to about 300° Fahrenheit. The pulverized carbonate of lime while cold will be mixed with the hot sand in the required proportions and then mixed with the asphaltic cement, at the required temperature and in the proper proportion, in a suitable apparatus, so as to effect a thoroughly homogeneous mixture. Sand boxes and tar and asphalt gauges will be weighed up daily in presence of inspectors.

The pavement mixture prepared in a manner thus indicated will be laid on the foundation; it will be laid to such depth as will give a thickness of 2½ inches, after being consolidated by rollers. It will be brought to the ground in carts, at a temperature of not less than 250° Fahrenheit nor more than 310° Fahrenheit, and if the temperature of the air is less than 50°, the contractor must provide canvas covers for use in transit. It will then be carefully spread by means of hot iron rakes, in such manner as to give uniform and regular grade and to such depth that, after having receiving its ultimate compression of two-fifths, it will have a net thickness of 2½ inches. This depth will be constantly tested by means of gauges furnished by the Engineer Commissioner. The surface will then be compressed by hand-rollers, after which a small amount of hydraulic cement will be swept over it, and it will then be compressed by a steam-roller weighing not less than 5 tons, to be followed by another steam-roller weighing not less than 10 tons, the rolling being continued for not less than 10 hours for every 1,000 yards of surface.

All materials used, as well as the plant and methods of manufacture, will be subject to the inspection and approval of the Engineer Commisioner. The degree of fineness, both of sand, stone-dust, and powdered limestone, will be determined by testing with screens, as follows: The powdered carbonate of lime will be of such degree of fineness that 16 per cent. by weight shall be an impalpable powder of limestone, and the whole of it shall pass a No. 26 screen. The sand will be of such size that not more than 50 per cent. of it will pass a No. 80 screen, and the whole of it shall pass a No. 20 screen. The broken stone or stone-dust shall be the residue from the crushing of stone from the base and binder which passes a sieve of not more than 6 meshes to the inch.

Gutters, wherever directed, will be granite block or brick of such width as may be directed, laid upon a hydraulic base of not less than 4 inches in thickness, in accordance to specifications for granite block pavement or brick gutters. Where gutters

are not paved with granite blocks or bricks, they will for a width of 3 feet be painted with No. 4 paving tar, and ironed with hot smoothing irons. After the curb is set and pavement laid, hot paving tar will be poured into the joints of the curb until it rises and remains at the level of the pavement.

COMBINATION ASPHALT PAVEMENT ON BITUMINOUS BASE.

Combination asphalt pavement on bituminous base will consist of a base 4 inches, a binder of 1½ inches, and a wearing surface of 1½ inches in thickness, when compacted.

The space over which the pavement is to be laid will be excavated to the depth of 7 inches below the top of the surface of the pavement when completed. Any objectionable or unsuitable material below the bed must be removed and the space filled with clean gravel or sand well rammed. The bed will then be trimmed so as to be exactly parallel to the surface of the new pavement when completed, and the entire road-bed will be thoroughly rolled with a heavy steam-roller weighing not less than 5 tons. Upon this foundation will be laid the base and binder, 5½ inches in thickness, in the following manner:

Base.—The base will be composed of clean broken stone that will pass through a 3-inch ring, well rammed and rolled with a steam-roller weighing not less than 5 tons to a depth of 4 inches. The rolling will be continued until the stone ceases to creep before the roller and until it is evident the final compression has been reached. It will then be thoroughly coated with No. 4½ coal-tar paving cement in the proportion of about one gallon to the square yard of base.

Binder.—The second or binder course will be composed of clean broken stone, thoroughly screened, not exceeding 1 inch in the largest dimension, and No. 4 coal-tar paving cement. The stone will be heated to a temperature between 230° and 250° Fahrenheit by passing through revolving heaters, and thoroughly mixed by machinery with the paving cement in about the proportion of one gallon of No. 4 tar to one cubic foot of stone. It will be hauled upon the work, spread upon the base course to such thickness that when compacted it will be 1½ inches thick, and immediately rammed and rolled with hand and steam rollers while in a hot plastic condition.

Wearing surface.—The wearing surface will be 1½ inches thick when compacted, and will conform in all other respects to the wearing surfaces as prescribed for the standard asphalt pavement, as described in these specifications.

The pavement so constructed must be a solid mass 7 inches thick, and must be thoroughly rolled and cross-rolled until it has become hard and solid. It must be equal in every respect to the best pavement of this class which has been heretofore laid.

Gutters, wherever directed, will be granite block or brick of such width as may be directed, laid upon a hydraulic base of not less than 4 inches in thickness, in accordance to specifications for granite block pavement and for brick gutters herein.

NEW COMBINATION ASPHALT PAVEMENT ON HYDRAULIC BASE.

The new combination asphalt pavement on hydraulic base will be 7 inches in thickness, consisting of a base composed of 4 inches of hydraulic concrete and 2 inches of binder, 1½ inches when compacted, and a wearing surface of standard asphalt 2½ inches in thickness, or 1½ inches when compacted.

The space over which the pavement is to be laid will be excavated to the depth of 7 inches below the top surface of the pavement when completed. Any objectionable or unsuitable matter below the bed will be removed, and the space filled with clean gravel or sand well rammed. The bed will then be trimmed so as to be parallel to the surface of the pavement when completed, and the entire road-bed will be thoroughly rolled with a heavy steam-roller. Upon the bed thus prepared the pavement will be laid as follows:

Hydraulic base.—This will be laid 4 inches in thickness, conforming in all other respects to the hydraulic base prescribed for the standard asphalt pavement as described in these specifications.

Binder course.—This binder course will conform in all respects to the binder course prescribed for the combination asphalt pavement on bituminous base, as described in these specifications, will be 1½ inches in thickness when compacted.

Wearing surface.—The wearing surface will be 1½ inches thick when compacted, and will conform in all other respects to the wearing surfaces as prescribed for the standard asphalt pavement, as described in these specifications.

COAL-TAR DISTILLATE PAVEMENT.

Coal-tar distillate pavement will consist of a base and binder of 4½ inches in depth when compacted, and a wearing surface of 1½ inches in thickness when compacted. The space over which the pavement is to be laid will be excavated to the depth of 6 inches below the top of the surface of the pavement when completed. Any objectionable or unsuitable material below the bed must be removed and the space filled with clean gravel or sand well rammed. The bed will then be trimmed so as to be exactly parallel to the surface of the new pavement when completed, and the entire road-bed will be thoroughly rolled with a heavy steam-roller. Upon this foundation will be laid the base and binder, 4½ inches in thickness, in the following manner:

Base.—The base will be composed of clean broken stone that will pass through a 3-inch ring, well rammed and rolled with a steam-roller to a depth of 4 inches, and thoroughly coated with No. 4½ coal-tar paving cement in the proportion of about 1 gallon to the square yard of base.

Binder.—The second or binder course will be composed of clean broken stone, thoroughly screened, not exceeding 1½ inches in the largest dimension, and No. 4 coal-tar paving cement. The stone will be heated to a temperature between 230° and 250° Fahrenheit by passing through revolving heaters and thoroughly mixed by machinery, with the paving cement in about the proportion of 1 gallon of No. 4 tar to 1 cubic foot of stone. It will be hauled upon the work, spread upon the base course at least 2 inches thick and immediately rammed and rolled with hand and steam rollers while in a hot plastic condition.

Wearing surface.—The wearing surface will be composed of the following materials, and in the following proportions:

	Per cent.
Clean sharp sand	63 to 58
Broken stone or rock dust	28 to 23
Paving cement	13 to 15
Hydraulic cement	.9
Slaked lime	.15
Flower of sulphur	.1

The sand shall be clean, sharp river sand, free from clay, and of such size that not more than 20 per cent. shall be retained upon a sieve of 20 meshes to the inch, and not more than 5 per cent. shall pass a sieve of 70 meshes to the inch, about 60 per cent. to be coarser than 40 meshes to the inch. The broken stone or stone dust shall be the residue from the crushing of stone from the base and binder which passes a sieve of not more than 6 meshes to the inch.

The paving cement shall be composed of refined Trinidad asphalt, twenty-five to thirty parts; No. 4 coal-tar paving cement, seventy-five to seventy parts. The refined asphalt must contain at least 60 per cent. of pure bituminous matter soluble in carbon bisulphide. The No. 4 coal-tar paving cement must correspond to a standard to be furnished by the Engineer Commissioner, and be free from excess of sooty matter, napthaline and cresote oils, as determined by the inspector of asphalt and cements. The hydraulic cement, lime, and sulphur must be of the best commercial quality.

The materials for the wearing surface will be heated to not over 26° Fahrenheit, the paving cement in kettles, the sand and stone-dust in revolving heaters. To the latter the hydraulic cement, lime, and sulphur will be added cold in the sand box before going to the mixer. They will be thoroughly mixed by approved machinery, and the mixture carried upon the work where it will be spread upon the binder course 2 inches thick with hot iron rakes and other suitable appliances, and immediately compacted with hot tamping irons and hand and steam rollers, while in a hot and prastic state. In spreading the material the joints are to be diagonal to the line of the street. The surface will be finished with a dusting of dry hydraulic cement rolled in. In cool weather, or when ordered, the carts carrying the mixture are to be protected with canvas covers.

The pavement so constructed must be a solid mass, 6 inches thick, and must be thoroughly rolled and cross-rolled until it has become hard and solid. It must be equal in every respect to the best pavement of this class which has been heretofore laid. The relative proportions of the component materials will be changed upon the order of the Engineer Commissioner, as occasion shall require.

All materials used, as well as the plant and methods of manufacture, will be subject to the inspection and approval of the Engineer Commissioner.

The degree of fineness, both of sand, stone dust, and powdered limestone, will be determined by testing with screens, as follows: The powdered carbonate of lime will be of such degree of fineness that 16 per cent. of weight shall be an impalpable powder of limestone, and the whole of it shall pass a No. 26 screen. The sand will be of such size that no more than 50 per cent. of it will pass a No. 80 screen, and the whole of it shall pass a No. 20 screen. The broken stone or stone dust shall be the residue

from the crushing of stone from the base and binder which passes a sieve of not more than 6 meshes to the inch.

Gutters, wherever directed, will be granite block or brick of such width as may be directed, laid upon a hydraulic base of not less than 4 inches in thickness, in accordance to specifications for granite block pavement or brick gutters.

ASPHALT BLOCK PAVEMENT.

The size of the blocks will be 4 by 5 by 12 inches, and a variation of one-fourth of an inch from these dimensions will be sufficient grounds for rejecting any block. The blocks will be composed of paving cement, 8 to 12; crushed limestone, 92 to 88.

The paving cement will be made from refined Trinidad or other acceptable asphaltum and heavy petroleum. The petroleum must be freed from all impurities and brought to a specific gravity of from 18° to 22° Beaume, and a fire test of 250° Fahrenheit. The right is reserved to inspect the manufacture of the blocks at any time.

All bids must be accompanied by a specimen block of the size and quality described in these specifications, labeled with the name of the bidder and the locality of the factory; bids not accompanied by specimen blocks will not be accepted. The blocks will be tested for specific gravity and tensile and crushing strength, and all blocks furnished will be subject to test and approval.

The space over which the pavement is to be laid will be excavated to the depth of 12 inches below the top line of the proposed pavement, when fully rammed. Any objectionable or unsuitable material below the bed will be removed and the space filled with clean gravel or sand. Care must be taken in excavating to preserve the proper crown. All holes and inequalities will be filled with sand or gravel, such filling to be thoroughly compacted by rolling or ramming. Upon this foundation, as above, is to be laid a bed of fine bank gravel, to be screened from all pebbles measuring more than 1½ inches in their largest dimensions, 5 inches thick when compacted by rolling and ramming. Upon this will be laid a bed of fine, sharp sand, clean and dry, 2 inches in thickness, to serve as a bed for the blocks, which will be laid directly upon and imbedded in it with close joints. Special care will be observed to make the surface of this bed of sand exactly parallel to the surface of the pavement when complete. The blocks must be laid by the pavers standing or kneeling upon the blocks already laid, and not upon the bed of sand.

The blocks are to be laid diagonally with the line of the street, or at right angles, and with such crown as the Engineer Commissioner may direct, each course to be of blocks of an uniform width and depth, and so laid that all longitudinal joints shall be broken by a lap of at least 4 inches. Each course of blocks will be driven against the course preceding it by a heavy maul, in order to make the lateral joints as tight as possible, and the longitudinal joints will be closed by pressing each course in the direction of its length by a lever. When thus laid the blocks will be immediately covered with clean, fine sand, entirely free from any loam or earthy matter, perfectly dry, and screened through a sieve or screen having not less than 20 meshes to the inch. The blocks will then be carefully rammed by placing a plank over several courses and ramming the plank with a heavy rammer. The ramming will be continued until the blocks reach a firm, unyielding bed and present a uniform surface, with proper grade and crown. Any lack of uniformity in the surface must be corrected by taking up and relaying the blocks. When the ramming is complete a sufficient amount of fine, dry sand, as above described, will be spread over the surface, and swept or raked into the joints.

GRANITE BLOCK PAVEMENT.

The granite block pavement will be laid on a foundation of gravel and sand, with filling of hot paving cement. The granite blocks will be furnished by the District at the property-yards, or at streets or reservation where they may be stored.

The space over which the pavement is to be laid will be excavated to the depth of 12½ inches below the surface of the proposed pavement when completed. Any objectionable or unsuitable material below the bed will be removed and the space filled with clean gravel or sand. Care must be taken in excavating to preserve the proper crown. All holes and inequalities to be filled with sand or gravel, and such fillings to be thoroughly compacted by rolling or ramming.

Upon this foundation is to be laid a bed of fine bank gravel, 4 inches in depth, when compressed, screened from all pebbles measuring more than 1½ inches in their largest dimensions, and thoroughly rammed. Upon this will be laid a bed of fine, sharp sand, clean and dry, 3 inches in thickness, to serve as a bed for the blocks, which will be laid directly upon and embedded in it, with close joints. The stone blocks are to be laid at right angles with the line of the street; each course to be of

blocks of a uniform width and depth, and so laid that all longitudinal joints shall be broken by a lap of at least 2 inches. When thus laid, the blocks will be immediately covered with clean, fine, hot dry gravel, in proper quantities, raked until all the joints become filled therewith, and the blocks will then be carefully rammed to a firm, unyielding bed, with uniform surface, and with proper grade. There will then be poured into the joints at a temperature of 300° Fahrenheit paving cement of proper consistency, to be obtained by the direct distillation of coal-tar. The cement required is that ordinarily numbered 6 at the manufactory. It will be poured into the joints of the pavement until the sand beneath and the gravel between the blocks will absorb no more and the joints are filled flush with the upper surface of the pavement. Dry, coarse sand will then be poured along the joints and spread over the entire pavement. Any wastage of paving cement by pouring over the surface of the pavement instead of between the blocks must be covered with a sufficient quantity of fine dry gravel to absorb it.

LAYING GRANITE BLOCKS ADJACENT TO RAILWAY TRACKS.

When asphalt pavement is laid in a street containing the tracks of a street railroad one row of *selected* granite paving blocks will be laid next to the track, alternating as headers and stretchers toothing into the pavement. The blocks will be furnished by the District at the property-yards or District reservations, and must be hauled to the street at the contractor's expense. The foundation will extend to the depth of the bottom of the cross-ties, and will be similar in all respects to the foundation of the carriageway pavement, except as to thickness of base. If the foundation consists of bituminous concrete the blocks will be laid directly upon and imbedded in the binder while it is still in a hot and plastic condition. If the foundation consists of hydraulic cement concrete the base will be covered with a layer of fine, sharp sand, washed and dried, 2 inches in thickness, and the blocks will be laid directly upon and imbedded in the sand with close joints.

The top of the blocks will be even with the surface of the tread of the rail, which shall conform with the grade of the street. The blocks will be laid before the wearing surface is laid upon the carriageway, and carefully rammed to a firm bed. Care will be taken to fit them well up against the stringers of the railroad. The space back of the blocks will be filled to the surface of the base for the carriageway pavement with the same material as is used for said base, well rammed.

Immediately after the wearing surface shall have been laid clean, fine, hot gravel, not larger than three-fourths of an inch in any dimensions, will be poured into the joints of the blocks until they become nearly filled. There will then be poured into the joints, at a temperature of 300° Fahrenheit, paving cement made of No. 6 coal-tar distillate, until the joints are completely filled flush with the surface of the pavement. Additional fine, hot gravel will then be poured along the joints, and will be consolidated by tapping with a light rammer. If found necessary, additional paving cement will be poured between the blocks until the joints are thoroughly filled.

In measuring this work for payment, when standard sized granite blocks are used, the area included between the outer edge of the rail and a line parallel to and 6 inches from rail will be taken as the area of granite block pavement laid. Bids will be based on this rule, When so ordered, the block pavements will be extended to cover the entire area included between the rail and line parallel to and 2 feet distant from said rail. In case the tracks are laid with a grooved girder rail, these headers and stretchers may be omitted, if so ordered by the Engineer Commissioner, and the asphalt pavement be laid close to the rail.

MAINTENANCE.

The law requires that contractors shall keep new pavements in repair for a term of five years from the date of the completion of their contracts. (Act June 11, 1878, sec. 5, par. 9.)

SPECIAL PAVEMENTS.

Bidders are at liberty to submit for consideration proposals and specifications for any special or patented pavement which may be deemed suitable for roadways, furnishing in each case all necessary particulars and accurate statements of components and method of manufacture.

SPECIAL SPECIFICATON.

E STREET, PENNSYLVANIA AVENUE TO FIFTEENTH STREET NORTHWEST; TWENTIETH STREET FROM R TO S STREETS NORTHWEST; NINTH STREET FROM B TO C STREETS SOUTHWEST.

These streets are now paved with cobble and rubble, and the new pavement will be laid upon this old pavement as a base. The street will be carefully gone over and all loose earth and other material of like nature removed. Stones which project too much will be rammed down, and where holes exist they will be repaired in a manner to make the base solid and firm. The gutter flags will be removed and sufficient earth excavated to permit of the emplacement of the regular bituminous base, as prescribed for asphalt pavements on bituminous base. This bituminous base will then be put in.

The whole area between the curbs will then be covered with a coat of binder (as prescribed for asphalt pavement on bituminous base), which will be carefully rammed into all interstices, and will be of such thickness that it will, when thoroughly compacted, be at least one-half inch above the most projecting stones. This will be thoroughly and carefully rolled to a smooth and even surface. Upon this will be laid a wearing surface coat of asphalt composition conforming in all respects to that prescribed for the wearing surface coat of the asphalt pavements on bituminous base.

The price named for the pavement will include everything done on the street, except work in connection with setting or resetting curb and laying sidewalks.

FIFTEENTH STREET FROM NEW YORK AVENUE TO PENNSYLVANIA AVENUE.

The work to be done consists in removing the present pavement and laying a new one described herein.

The asphalt surface coat will be hauled to the New Hampshire avenue property yard and piled up as compactly as possible. The other material composing the pavement will be hauled and deposited in such place or places as the Engineer Commissioner may order. The price bid for removing old material will be understood to include the above requirements. The old pavement being removed the earth will be excavated to the depth of 9½ inches below the finished surface of the pavement, and prepared for the reception of the pavement.

The pavement will consist of a base of Portland cement concrete 6 inches in depth. This concrete will be made of cement, sand, and broken stone in the proportions of 1, 3, and 5, by measure. The Portland cement must be slow setting and equal in all respects to that called for by current District of Columbia specifications for Portland cement. The sand will be clean, sharp, siliceous sand, free from earth, clay, or other foreign matter. The broken stone will be the best quality, broken so that none shall fail to pass a 2-inch ring, and screened entirely free from dust, dirt, and all impurities. Upon this will be laid a binder coat, which when fully and carefully rolled and compacted shall be 1½ inches thick. This binder coat shall conform in all respects to the binder coat prescribed for asphalt pavements on bituminous base.

Upon this binder coat will be laid an asphalt wearing surface coat conforming in all respects to the asphalt wearing coat prescribed for standard asphalt pavements, except that it shall be 2 inches thick when thoroughly and carefully rolled and compacted. The entire pavement shall be 9½ inches when finished.

SEVENTEENTH STREET, PENNSYLVANIA AVENUE TO NEW YORK AVENUE.

The work to be done consists in removing the present pavement as far as may be necessary and laying a new pavement adjusted to the curb on the east side of the street. The asphalt wearing surface coat removed will be hauled to the New Hampshire avenue property yard and piled up as compactly as possible. All other materials excavated will be hauled to the nearest property yard or such other points as may be designated by the Engineer Commissioner.

The price bid per square yard for removing old material will be understood to cover the removal of the old pavement, as herein specified.

RESURFACING PENNSYLVANIA AVENUE.

The present surface coat of asphalt will be removed and the material composing it will be hauled to the property yard near the foot of New Hampshire avenue, and piled up in as compact a manner as possible. The materials from the avenue east of Sixth street will be piled separately from that from other portions of the avenue. The surface of the concrete base will then be prepared for the proper reception of the

new surfacing by picking it with sharp picks. The picked holes must be not less than 4 inches apart and at least half an inch in depth. All material loosened to be carefully swept up and removed.

The prices bid for the work will include this work of preparing the concrete base, for which no extra price will be paid.

Upon the concrete base so prepared will be laid a coat of binder similar to the binder coat specified for the asphalt pavements on bituminous base. This will be laid to such a thickness as may be ordered and as may be necessary to bring the street to the desired grade. It will be thoroughly compacted by rolling while hot, in the same manner as prescribed for the binder course in the new asphalt pavements.

In no case will the thickness of the binder course be more than 2½ inches. In case greater thickness is required to bring the pavement to the desired grade, it will be obtained by laying upon the old concrete base a sufficient thickness of broken stone, not exceeding 1½ inches in size, which shall be thoroughly settled into place by rolling or ramming and then treated with hot coal-tar in the manner prescribed for the base course of asphalt pavements on bituminous base. Upon this will be laid the binder course as prescribed above. The bituminous binder and the material for the base course will be measured in carts as brought to the work, but the prices named will include their emplacement in the work.

Upon the binder course so prepared there will be laid a surface coat of asphalt mixture, similar in composition to the asphalt surface coat required in new asphalt pavements, and which shall be, when thoroughly compacted, 2 inches thick. The compacting, ramming, and rolling will be in accordance with current District of Columbia specifications for new pavements contained in these specifications.

It is probable that the tracks of the Washington and Georgetown Railroad Company and other tracks crossing the avenue will be relaid with grooved girder rails. If this is done the asphalt pavement must be laid close up to the rails and the necessary concrete base and bituminous binder added. Wherever required the contractor will lay the necessary base, binder, and asphalt surface in spaces between the tracks of the street railroads on the avenue. This will generally be at the street crossings.

Wherever ordered curb will be redressed and reset or new curb set in accordance with current specifications therefor. The contractor will be prepared to do such extra work as may be ordered, for which a compensation to be approved by the Engineer Commissioner shall be paid him.

The hydraulic concrete necessary for this work shall be of the same quality and prepared in the same manner as the concrete specified for the base course of standard asphalt pavements. It will be measured in place after being properly compacted.

All old material removed from the street and which is the property of the District will be hauled to such points as the Engineer Commissioner may direct.

OTHER PAVEMENTS.

Parties who may desire to do so are authorized to submit specifications and proposals other than those given above for resurfacing Pennsylvania avenue, which will be considered by the Commissioners, the object being to obtain the best smooth pavement possible. Any specifications other than those above given must be clear and definite in every particular.

SPECIFICATIONS FOR ASPHALT SIDEWALKS.

Grading.—The space over which the sidewalk is to be laid will be graded to a depth of 3 inches below the finished surface of the pavement. Soft and spongy places not affording a firm foundation will be removed and good, clean gravel substituted therefor. The bed thus prepared will be thoroughly rolled and rammed to the satisfaction of the Engineer Commissioner or his authorized representative.

Tree spaces.—A space of such dimensions as may be directed by the Engineer Commissioner (usually 2 by 4 feet) will be left around each tree. Around the edges of this space will be planted a frame-work of Georgia pine 2 inches in thickness and 9 inches in depth. The plank forming the rear of the frame-work, and which is parallel to the curb, will be firmly nailed to the other two pieces, and will be cut in such a manner that it will bind underneath the pavement to be laid, so that the top edges shall be even with the pavement when completed. A drawing showing this construction is on file in the engineer department. In the spaces between the frame-work and the sides of the trench coarse sand will be placed and compacted by tamping with narrow rammers, especially constructed for this purpose. These spaces will be thus filled to the subgrade of the pavement, and the tree-spaces will be filled with earth and left in a neat and clean condition.

Base.—On the bed prepared as above specified a layer of clean broken stone, of size not exceeding three-quarters of an inch in largest dimensions, will be spread to a

depth of 2½ inches. This will then be compressed by rolling and tamping to a thickness of 2 inches. On this will be poured, at a temperature of about 250° Fahrenheit, the residuum of coal-tar distillation known in the trade as No. 4 Paving Composition. About one-half a gallon of this composition will be used for each square yard of pavement, and it will be poured on the base of broken stone in such manner as to thoroughly coat the stones on the surface and fill the interstices thereof.

Wearing surface.—The cementing material of the wearing surface will be asphalt paving cement, prepared from the best quality of Trinidad asphalt, obtained from the so-called pitch or asphalt lake in the island of Trinidad, and the residuum of petroleum distillation, mixed in the proportions of about six parts of refined asphalt and one part of residuum. With this paving cement will be combined the old asphalt pavement from Pennsylvania avenue or elsewhere, and crushed granular limestone quartz or other stone of a white color in the following proportions:

	Per cent.
Old pavement	69 to 76
Crushed stone	26 to 15
Asphalt cement as above specified	5 to 9
	100 100

The old pavement will be furnished by the District at the property yards near the foot of New Hampshire avenue, the other materials will be furnished by the contractor. The crushed stone in this wearing surface will vary in size from one-quarter of an inch to dust.

The old asphalt pavement will be broken into pieces not exceeding 4 inches in their largest dimensions, and will then be mixed with the crushed stone in the proportion of about four parts of asphalt pavement to one part of crushed stone. This mixture will then be heated to a temperature of about 300° Fahrenheit in a suitable apparatus, and thoroughly mixed and made homogeneous by stirring, special care being taken not to overheat the material or burn the asphalt. During the progress of mixing, asphalt cement will be added in the proportion of 5 per cent. to 9 per cent. by weight of the mixture; the exact proportion of asphalt cement thus to be added for the purpose of enriching the old pavement will be determined by the Engineer Commissioner.

The material thus prepared will be brought to the work at a temperature of 250° to 275° Fahrenheit, and will be spread on the base above specified by means of hot iron rakes to a thickness 1½ inches, and will then be compressed by rolling and ramming to a thickness of 1 inch. A small amount of hydraulic cement will then be spread over the surface, and the rolling will be continued until the pavement is thoroughly compressed. Care shall be taken at all times not to interfere with business or travel more than is absolutely necessary for the faithful performance of the work. During the time that travel is necessarily closed at any point the contractor shall provide temporary walks, said walk to be at all times in condition for pedestrians and easy of access from adjoining walks. The contractor shall remove all stone, plank, brick, or other material of value from points where the sidewalks are to be laid, as the work progresses, and shall haul them to the nearest property yards or otherwise dispose of them, as the Engineer Commissioner may desire.

Curb.—Whenever ordered the curb will be reset. Curb will be redressed by the contractor whenever ordered, for which a fair price, to be fixed by the Engineer Commissioner, will be paid.

Locality.—The sidewalk specified above will be laid under the permit and compulsory system, and the contractor will be required to lay it wherever ordered by the Commissioners.

SPECIFICATIONS FOR ARTIFICIAL BLOCK SIDEWALKS.

The contractor shall remove all stone, plank, bricks, or other materials of value from points where the sidewalks are to be laid as the work progresses, and shall haul them to the nearest property yard or otherwise dispose of them, as the Engineer Commissioner may direct. Care shall be taken at all times not to interfere with business or travel more than is absolutely necessary for the faithful performance of the work. No more than 100 feet shall be closed to travel at any one time, nor remain closed for a longer time than three days, and free ingress and egress from the streets to all stores and hall-ways shall be provided for at all times; and during the time that travel is closed at any point the contractor shall provide a temporary walk, said walk to be at all times in condition perfectly safe for pedestrians and easy of access from adjoining walks.

The contractor shall make such cutting and filling as may be necessary to bring the foundation to the subgrade, 6 inches below the established grade of the sidewalk.

Whenever the Engineer Commissioner or inspector may deem it necessary the foundation shall be consolidated by wetting, rolling, or ramming, to give it proper stability. Upon the foundation thus prepared there shall first be laid 3 inches of concrete, composed of one part natural hydraulic cement, two and one-half parts sand, and five parts broken stone, which shall be rammed in place to the satisfaction of the Engineer Commissioner. On this concrete bed shall be laid three-quarters of an inch of mortar, composed of four measures of clean, sharp sand and one of Portland cement, which shall be put in as dry as possible and rammed in place with an iron rammer weighing at least 25 pounds. Upon the foundation thus prepared shall be laid square blocks or tiles 2¼ inches thick, measuring 18 inches on a side. They shall be laid so as to present a true surface on top and conform to the exact grade of the sidewalk. A thin grouting of pure Portland cement of the best quality shall be spread over the surface and carefully swept into the joints. All superfluous grouting shall be cleaned off, and the walk shall be protected with plank or otherwise until the cement has thoroughly set.

Drive-ways shall be laid with granite or asphalt blocks, as may be directed by the Engineer Commissioner. The tiles shall be 2¼ inches thick. The lower 1¾ inches to be composed of one part Portland cement (equal to that specified in current District of Columbia specifications) and two parts of clean, sharp sand, thoroughly mixed, using as small a quantity of water as possible, and carefully rammed into the molds. The upper one-half inch and the sides for one-half inch shall be composed of one part Portland cement, of same quality as above, and one part of clean, sharp sand.

The surface shall be finished smooth, but not polished. The tiles, when being seasoned, shall be kept wet for the first five days. No tiles shall be used on the work unless guaranteed by the contractor to be at least thirty days old. Unless otherwise ordered, the edge of the sidewalk shall be finished with plastering of Portland cement and sand of equal parts. The blocks will be laid with their edges perpendicular to or parallel with the line of the street, as may be ordered by the Engineer Commissioner.

Cement inspection.—No cement shall be used on this work unless approved by the Engineer Commissioner. For this purpose he shall be entitled to take one-half pound from each package. The decision of the Engineer Commissioner shall be final in all cases, and no cement condemned by him shall be used on the work for any purpose whatever. All cement will be required to pass the tests specified in current District of Columbia specifications.

All surplus material and refuse shall be removed by the contractor within twenty-four hours after the completion of the work, and in case of neglect on the part of the contractor to do so within the specified time, the Engineer Commissioner shall have the same removed, and the expense thereof shall be charged to the contractor and deducted from his estimates. Whenever any private drive-way crosses the sidewalk the plan thereof shall be modified as the Engineer Commissioner shall direct.

No material of any kind shall be used until it has been examined and approved by the Engineer Commissioner, who shall have full power to condemn the work or material not in accordance with the specifications and to require the contractor to remove any work or material so condemned, and at his own expense to replace the said work or material to the satisfaction of the Engineer Commissioner. In case the contractor shall neglect or refuse, after written notice, to remove or replace said rejected work or material, it shall be removed and replaced, by order of the Engineer Commissioner, at the contractor's expense.

The work is to be commenced and carried on at such times and places and in such manner as the Engineer Commissioner shall direct.

The contractor will not be allowed to obstruct private drive-ways or approaches or to dig up or occupy the street by material more than is absolutely necessary for the prosecution of the work, special care being taken to inconvenience the public as little as possible.

When the construction of any piece of work is begun it shall be fully completed before the force is removed. In case this is not done, the Engineer Commissioner shall have the work done, and the expense thereof shall be charged to the contractor and deducted from his estimates.

If any overseer or workman employed by the contractor shall be declared by the Engineer Commissioner to be unfaithful or incompetent, or shall refuse to obey the instructions of the inspector, the contractor shall forthwith dismiss such person, and not again employ him on any part of the work. The contractor will be held responsible for all injury done to the work in any way until it is accepted and measured by the engineer.

Measurement of work.—All artificial stone-block walks, including stone and mortar foundation, will be paid for by the square yard of finished surface, in accordance with the schedule in printed form of bid, except where it is fitted around poles, lamp-posts, or scuttle-holes, in which cases these spaces will not be deducted. Tree spaces will be deducted.

Approximate estimate.—Artificial stone-block walk, 8,000 square yards; resetting curb, 500 linear feet.

Curb.—Whenever ordered the curb will be reset. Curb will be redressed by the contractor whenever ordered, for which actual cost plus 15 per cent. will be paid.

Tree spaces.—Tree spaces will be left wherever necessary. These spaces will be outlined by boards of sound Georgia pine 2 inches thick and 9 inches wide, set on edge with their top edge even with the pavement when completed. The plank forming the rear of this frame-work and which is parallel with the curb will be firmly nailed to the other two pieces, and will be cut in such a manner that it will bind underneath the pavement when completed. The blocks will be laid as closely to the boards as possible, and all corners and vacant spaces will be filled with mortar similar in composition to that of which the blocks are made.

MASSACHUSETTS AVENUE EXTENDED.

This avenue will be brought to grade and will be improved in accordance with the specifications herein contained for grading and regulating streets with macadam roadway. The stone for this purpose may be taken from the dump at the Rock Creek tunnel-shaft by the contractor. Only good hard stone will be permitted to be used. In bidding contractors may count on this stone being furnished without charge.

SPECIFICATIONS FOR BRICK GUTTERS.

Whenever ordered on streets to be paved with asphalt, brick gutters will be laid. The materials necessary to be removed will be excavated to a depth of 8½ inches below the top line of the proposed gutter. Any objectionable or unsuitable material below the bed will be removed and the space filled with clean sand or gravel. All holes or inequalities will be filled to a proper level with sand or gravel well compacted by rolling or ramming. Upon the foundation thus prepared there will be placed a layer of hydraulic cement concrete four inches in thickness. This concrete layer shall conform in all respects, except depth, with the concrete base as specified herein for standard asphalt pavements. Upon the concrete base so prepared paving bricks will be placed on edge with their lengths at right angles to the curb and breaking joints in the direction of the curb. The outer edge of the gutter will be left with alternately projecting bricks to tooth into the asphalt pavement.

The bricks must be so laid that the upper service will be smooth and at the proper grade.

Immediately after the completion of the asphalt pavement adjacent to the gutter, hot paving tar will be poured into the joints of the bricks until it rises to the surface. The gutter will then be covered with a sprinkling of sharp dry sand. If so ordered, instead of the hot paving tar a grouting of Portland cement and sharp sand in equal proportions, mixed with a sufficiency of water to make a thin grouting, will be used. The bricks for this gutter paving will be furnished by the District of Columbia at its property yards and hauled thence to the site of the work by the contractor for laying them.

Bricks for gutters may be furnished by the District of Columbia at the site of the work. A separate bid is requested for the work if bricks be so furnished.

Order 2.—*Judicial executions.*																															
Hanging											1																				
Total judicial executions											1																				
Order 3.—*Homicides.*																															
Wounds of throat																															
Infanticide by neglect																															
strangulation																															
Smothered											1			1	1	1															
Pistol wound of head											2																				
chest											1																1				
abdomen																															
shot wound of heart						1																									
Blow on head								1																							
Fracture of skull										1																					
Punctured wounds								1							1																
of stomach																															
Incised wounds												1																			
Punctured wound of aorta																															
Total homicides						1		2		5	1		1	2	1											1					
Order 4.—*Suicides.*																															
Bromidia												1																			
Chloral														1																	
Cyanide of potash								1																							
"Rough on Rats"												2																			
Opium																1															
Pistol wound of heart																															
Gunshot wound of head								1								2															
Jumped from window																															
Incised wound																1											1				
of throat																1															
Drowning																1															
Total suicides								2				3		1		6											1				
Order 5.—*Wounds received during late civil war.*																															
Injuries received during war of rebellion																											1				
Total deaths from violence	3		3		9	1	6	1	12	1	15	2	7	3	6	3	15		5		6	1	2		5	4	2	1
Total deaths from all causes	41	46	38	45	54	69	69	114	109	107	103	123	117	112	83	90	164	102	77	86	157	122	73	59	165	117	60	50

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	AGE OF DECEDENT.																SOCIAL RELATIONS.							
	70 to 80 years.				80 to 90 years.				Above 90 years.				Unknown age.				Married.				Single.			
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
CLASS V.—VIOLENCE.																								
Order 1.—*Accidents and negligence*—Continued.																								
Fracture of skull by falling derrick																							1	
Compound fracture of leg																					2			
Fracture of tibia and fibula, tetanus																					1			
skull																	2	1			1			
sternum																							1	
femur		1	1		1													1					1	
Dislocation of cervical vertebræ	1																1							
Dynamite explosion																					1			
Crushed by fence																	1							
falling rock																			1					
Burns and scalds																	1	1		1	3	3	2	3
Extraction of tooth																		1						
Injury by falling bank of earth																	1				1			
from fall	1	1				1											1	1	1		1	2		
of spine																			1					
to forehead																							1	
Smothered																		1					1	2
Overlaid by mother																						1	2	2
Choked by food																							1	
Smothered in sand-bank																			1					
Pistol wound of chest																					1		1	
Gunshot wound of head																	1							
Fall of sweeping-machine																								
down stairs																					1			
into ice-house																	1							
from high chair																							1	
Separation of funis																								1
Multiple injuries																			1					
Illuminating gas																	1							
Laudanum																								
Sausage																							1	
Hæmorrhage																				1				
Total accidents and negligence	2	2	1		2	1	1										17	7	12	3	25	6	30	9

Order 2.—*Judicial executions.*																								
Hanging																						1		
Total judicial executions																						1		
Order 3.—*Homicides.*																								
Wounds of throat																								1
Infanticide by neglect																						1		1
strangulation																						1		
Smothered																								1
Pistol wound of head																1		1				2		
chest																						2		
abdomen																						1		
shot wound of heart															1									
Blow on head																						1		
Fracture of skull															1									
Punctured wounds																						1		
of stomach																				1				
Incised wounds																	1							
Punctured wound of aörta																		1						
Total homicides															2	1	1	2	1			9		3
Order 4.—*Suicides.*																								
Bromidia															1									
Chloral																						1		
Cyanide of potash																				1				
"Rough on Rats"																				2				
Opium															1									
Pistol wound of heart	1														1									
Gunshot wound of head															1					2				
Jumped from window	1																							
Incised wound																								
of throat															1									
Drowning																				1				
Total suicides	2														5					6		1		
Order 5.—*Wounds received during late civil war.*																								
Injuries received during war of rebellion															1									
Total deaths from violence	4	2	1		2	1	1								25	8	13	5	32	6		41		12
Total deaths from all causes	118	100	54	58	41	60	17	27	3	10	9	14			472	335	272	212	845	648		827		853

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	SOCIAL RELATIONS.								NATIVITY.															
	Widow or widower.				Unknown.				District of Columbia.				Other parts of United States.				Foreign.				Unknown.			
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
CLASS V.—VIOLENCE.																								
Order 1.—*Accidents and negligence*—Continued.																								
Fracture of skull by falling derrick															1									
Compound fracture of leg									1								1							
Fracture of tibia and fibula, tetanus									1															
skull									2				1	1										
sternum											1													
femur	1													1	1		1							
Dislocation of cervical vertebræ																	1							
Dynamite explosion													1											
Crushed by fence									1															
falling rock															1									
Burns and scalds		1							2	3	2	2	2	1		2		1						
Extraction of tooth														1										
Injury by falling bank of earth									2															
from fall	1	1								1				2	1		3	1						
of spine															1									
to forehead															1									
Smothered											1	2		1										
Overlaid by mother										1	2	2												
Choked by food															1									
Smothered in sand-bank															1									
Pistol wound of chest													1		1									
Gunshot wound of head													1											
Fall of sweeping-machine	1												1											
down stairs																	1							
into ice-house																	1							
from high chair											1													
Separation of funis												1												
Multiple injuries															1									
Illuminating gas	1												2											
Laudanum				1												1								
Sausage											1													
Hemorrhage																1								
Total accidents and negligence	4	3		1			1		15	5	19	7	19	8	22	4	12	3		1			2	1

Order 2.—*Judicial executions.*																									
Hanging															1										
Total judicial executions																									
Order 3.—*Homicides.*																									
Wounds of throat											1														
Infanticide by neglect										1	1														
strangulation										1															
Smothered											1														
Pistol wound of head											1		1	2											
chest														1									1		
abdomen										1															
shot wound of heart																1									
Blow on head														1											
Fracture of skull												1													
Punctured wounds										1															
of stomach									1																
Incised wounds														1											
Punctured wound of aörta															1										
Total homicides									1		4	4	1	1	5	1	1						1		
Order 4.—*Suicides.*																									
Bromidia									1																
Chloral															1										
Cyanide of potash												1													
"Rough on Rats"									1								1								
Opium												1													
Pistol wound of heart																	1								
Gunshot wound of head												2					1								
Jumped from window	1											1													
Incised wound	2											1					1								
of throat																	1								
Drowning																	1								
Total sucides	3								2			6		1			6								
Order 5.—*Wounds received during late civil war.*																									
Injuries received during war of rebellion																	1								
Total deaths from violence	7	3		1			1		18	5	23	11	26	9	29	5	20	3		1			3	1	
Total deaths from all causes	136	271	77	192	5	1	4	2	706	624	706	760	476	439	462	486	269	191		1	7	1	12	12	

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued

Cause of death.	Total deaths from each cause.	Per cent. of each cause to total mortality.	DEATH-RATE Deaths per 1,000 inhabitants.		RECAPITULATION. Total by color and sex.				Total by color.		Total by sex.		1888. July.				August.			
					W.		C.						W.		C.		W.		C.	
			W.	C.	M.	F.	M.	F.	W.	C.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
RECAPITULATION.																				
Zymotic:																				
Miasmatic diseases	1,093	21.216	3.404	6.437	310	268	228	287	578	515	538	555	44	64	38	46	54	37	50	56
Enthetic diseases	24	.466	.024	.250	1	3	12	8	4	20	13	11	.....	.....	1	.....	.....	1	2	1
Dietic diseases	116	2.250	.312	.788	32	21	39	24	53	63	71	45	9	3	7	4	4	4	5	1
Parasitic diseases	5	.097	.006	.050	.....	1	2	2	1	4	2	3	....	1	.....	.....	.....	.....	.....	1
Total zymotic diseases	1,238	24.029	3.746	7.525	343	293	281	321	636	602	624	614	53	68	46	50	58	42	57	59
Constitutional:																				
Diathetic	170	3.299	.777	.475	43	89	12	26	132	38	55	115	2	8	...	2	1	6	....	2
Tubercular	937	18.187	2.447	6.512	214	202	247	274	416	521	461	476	13	15	23	12	19	11	20	31
Total constitutional diseases	1,107	21.486	3.224	6.987	257	291	259	300	548	559	516	591	15	23	23	14	20	17	20	33
Local:																				
Nervous system	695	13.496	2.253	3.902	239	144	154	158	383	312	393	302	18	14	9	9	26	5	21	19
Circulatory organs	280	5.434	.953	1.475	96	66	52	66	162	118	148	132	8	5	5	10	7	4	6	2
Respiratory organs	597	11.584	1.635	3.987	145	133	173	146	278	319	318	279	3	3	4	4	6	1	8	6
Digestive organs	398	7.725	1.441	1.912	135	110	83	70	245	153	218	180	11	15	14	11	24	15	8	10
Urinary organs	130	2.527	.546	.462	57	36	21	16	93	37	78	52	5	2	1	....	3	.....	.....	1
Generative organs	18	.349	.066	.087	1	10	2	5	11	7	3	15	.....	.....	1	1	.....	1	2	1
Osseous and locomotory	18	.349	.024	.175	2	2	5	9	4	14	7	11	.....	.....	.....	.....	.....	1	.....	1
Integumentary	10	.194	.047	.025	3	5	1	1	8	2	4	6	1	.....	.....	.....	.....	1	.....	1
Total local diseases	2,146	41.658	6.965	12.025	678	506	491	471	1,184	962	1,169	977	46	39	44	35	66	28	45	41
Developmental:																				
Infants	254	4.930	.717	1.650	74	48	60	72	122	132	134	120	5	2	8	6	6	5	4	12
Women	51	.989	.165	.287	.....	28	.....	23	28	23	.....	51	....	1	....	1	..	.....	.....	2
Old age	188	3.648	.606	1.062	39	64	34	51	103	85	73	115	1	8	5	5	8	1	2	....
Nutrition	14	.271	.064	.038	3	8	.....	3	11	3	3	11	1	1	.....	.....	1	.....	.....	.....
Total developmental diseases	507	9.838	1.552	3.037	116	148	94	149	264	243	210	297	7	12	13	12	15	6	6	14
Violence:																				
Accidents and negligence	118	2.293	.365	.700	46	16	43	13	62	56	89	29	8	1	5	....	6	4	1	1
Judicial executions	1	.019	.....	.012	.....	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

Homicides	19	.368	.024	.187	3	1	10	5	4	15	13	6	....	....	1	....	....	2	....	....
Suicides	15	.290	.083	.012	14	.....	1	.....	14	1	15	.....	.....	.....	.....	.....	2	.....	.....	.....
Wounds received during the late civil war	1	.019	.006	.....	1	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total violence	154	2.989	.478	.911	64	17	55	18	81	73	119	35	8	1	6	....	8	4	3	1
SUMMARY.																				
I. Zymotic diseases	1,238	24.029	3.746	7.525	343	293	281	321	636	602	624	614	53	68	46	50	58	42	57	59
II. Constitutional diseases	1,107	21.486	3.224	6.987	257	291	259	300	548	559	516	591	15	23	22	14	20	17	20	33
III. Local diseases	2,146	41.658	6.965	12.025	678	506	491	471	1,184	962	1,169	977	46	39	44	35	66	28	45	41
IV. Developmental diseases	507	9.838	1.552	3.037	116	148	94	149	264	243	210	297	7	12	13	12	15	6	6	14
V. Violence	154	2.989	.478	.911	64	17	55	18	81	73	119	35	8	1	6	....	8	4	3	1
Grand total from all causes, by sex and color	5,152	100.000	15.965	30.485	1,458	1,255	1,180	1,259	2,713	2,439	2,638	2,514	129	143	132	111	167	97	131	148
Total from all causes, by color	.....	.....	.....	.....	2,713		2,439		.....	.....	.....	.....	272		243		264		279	
Percentages, by color, to total mortality	.....	.....	.....	.....	52.66		47.34		.....	.....	.....	.....	5.27		4.71		5.12		5.41	
Rate of deaths per 1,000 inhabitants (white and colored).	.....	.....	.....	.....	15.96		30.48		.....	.....	.....	.....	1.60		3.04		1.55		3.49	
Grand total from all causes	.....	.....	.....	.....	5,152				.....	.....	.....	.....	515				543			
Death-rate per 1,000 inhabitants (total)	.....	.....	.....	.....	20.608				.....	.....	.....	.....	2.060				2.172			

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	1888.																								1889.			
	September.				Total first quarter.				October.				November.				December.				Total second quarter.				January.			
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
RECAPITULATION.																												
Zymotic:																												
Miasmatic diseases	34	31	32	40	132	132	120	142	25	28	19	32	13	17	14	13	15	9	5	16	53	54	38	61	22	12	11	11
Enthetic diseases	....	1	....	....	....	2	3	1	....	....	....	1	....	....	....	....	....	....	1	1	....	....	1	2	....	....	2	....
Dietic diseases	2	3	2	6	15	10	14	11	2	1	5	2	....	....	2	1	2	....	1	....	4	1	8	3	1	1	2	1
Parasitic diseases	....	....	1	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total zymotic diseases	36	35	35	46	147	145	138	155	27	29	24	35	13	17	16	14	17	9	7	17	57	55	47	66	23	13	15	12
Constitutional:																												
Diathetic	3	9	2	2	6	23	2	6	2	10	1	2	8	2	1	3	4	11	....	1	14	23	2	6	3	5	2	2
Tubercular	24	13	18	27	56	39	61	70	17	24	24	13	16	13	13	20	15	17	18	25	48	54	55	58	24	11	19	33
Total constitutional diseases	27	22	20	29	62	62	63	76	19	34	25	15	24	15	14	23	19	28	18	26	62	77	57	64	27	16	21	35
Local:																												
Nervous system	14	14	11	10	58	33	51	38	15	10	11	17	19	15	6	11	17	11	19	13	51	36	36	41	26	13	9	15
Circulatory organs	4	3	5	1	19	12	16	13	9	3	3	7	8	6	4	4	5	11	4	5	22	20	11	16	5	5	5	3
Respiratory organs	5	5	2	6	14	9	14	16	11	12	17	14	11	7	13	8	18	25	19	21	40	44	49	43	17	14	30	21
Digestive organs	12	6	11	5	47	36	33	26	9	8	6	2	9	4	4	2	9	8	2	4	27	20	12	8	8	4	4	5
Urinary organs	3	2	1	3	11	4	2	4	2	1	2	1	6	4	2	2	4	4	2	....	12	9	6	3	10	3	2	....
Generative organs	....	....	....	....	....	1	2	1	....	....	....	1	1	1	....	....	....	1	....	....	1	2	....	1	....	1	....	....
Osseous and locomotory	....	....	....	2	....	1	1	4	....	....	....	....	....	1	....	1	....	....	1	....	....	1	1	1	....	....	....	1
Integumentary	1	....	....	....	2	1	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Total local diseases	39	30	30	27	151	97	119	103	46	34	39	42	54	39	29	28	53	60	47	43	153	133	115	113	66	40	50	45
Developmental:																												
Infants	8	3	5	4	19	10	17	22	6	9	2	7	8	5	3	8	....	5	5	2	14	19	10	17	10	4	10	6
Women	....	3	....	1	....	4	....	4	....	3	....	1	....	3	....	4	....	3	....	3	....	9	....	8	....	2	....	1
Old age	1	5	3	2	10	14	10	7	4	6	2	5	1	3	1	4	3	6	4	1	8	15	7	10	5	10	2	7
Nutrition	1	2	....	....	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total developmental diseases	10	13	8	7	32	31	27	33	10	18	4	13	9	11	4	16	3	14	9	6	22	43	17	35	15	16	12	14
Violence:																												
Accidents and negligence	1	....	5	1	15	5	11	2	5	3	3	....	5	2	1	2	3	1	3	3	13	6	7	5	4	....	3	....
Judicial executions	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Homicides			2				5		1		1					1			2	1	1		3	2				1	
Suicides	1				3				1								1				2				2					
Wounds received during the late civil war																														
Total violence	2		7	1	18	5	16	2	7	3	4		5	2	1	3	4	1	5	4	16	6	10	7	6		3	1		
SUMMARY.																														
I. Zymotic diseases	36	35	35	46	147	145	138	155	27	29	24	35	13	17	16	14	17	9	7	17	57	55	47	66	23	13	15	12		
II. Constitutional diseases	27	22	20	29	62	62	63	76	19	34	25	15	24	15	14	23	19	28	18	26	62	77	57	64	27	16	21	35		
III. Local diseases	39	30	30	27	151	97	119	103	46	34	39	42	54	39	29	28	53	60	47	43	153	133	115	113	66	40	50	45		
IV. Developmental diseases	10	13	8	7	32	31	27	33	10	18	4	13	9	11	4	16	3	14	9	6	22	43	17	35	15	16	12	14		
V. Violence	2		7	1	18	5	16	2	7	3	4		5	2	1	3	4	1	5	4	16	6	10	7	6		3	1		
Grand total from all causes, by sex and color	114	100	100	110	410	340	363	369	109	118	96	105	105	84	64	84	96	112	86	96	310	314	246	285	137	85	101	107		
Total from all causes, by color	214		210		750		732		227		201		189		148		208		182		624		531		222		208			
Percentages, by color, to total mortality	4.15		4.08		14.54		14.20		4.40		3.89		3.67		2.87		4.03		3.54		12.10		10.30		4.30		4.03			
Rate of deaths per 1,000 inhabitants (white and colored)	1.25		2.64		4.40		9.16		1.33		2.51		1.11		1.86		1.23		2.27		3.67		6.64		1.30		2.60			
Grand total from all causes	424				1,482				428				337				390				1,155				430					
Death-rate per 1,000 inhabitants (total)	1.696				5.928				1.712				1.348				1.560				4.620				1.760					

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	1889.																											
	February.				March.				Total third quarter.				April.				May.				June.				Total fourth quarter.			
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
RECAPITULATION.																												
Zymotic:																												
Miasmatic diseases	17	9	11	9	20	11	9	8	59	32	31	28	12	10	8	15	8	11	4	11	46	49	27	30	66	50	39	56
Enthetic diseases	....	1	1	1	....	....	2	2	....	1	5	3	....	....	2	....	....	....	....	1	1	....	1	1	1	....	3	2
Dietic diseases	1	1	....	1	5	2	2	2	7	4	4	4	....	2	7	1	2	1	3	2	4	3	3	3	6	6	13	6
Parasitic diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	1	1
Total zymotic diseases	18	11	12	11	25	13	13	12	66	37	40	35	12	12	18	16	10	12	7	14	51	32	31	35	73	56	56	65
Constitutional:																												
Diathetic	4	7	4	....	3	10	2	6	10	22	8	8	3	6	....	4	7	10	....	1	3	5	....	1	13	21	....	6
Tubercular	19	19	21	20	13	25	26	25	56	55	66	78	21	17	22	20	15	21	17	28	18	16	26	20	54	54	65	68
Total constitutional diseases	23	26	25	20	16	35	28	31	66	77	74	86	24	23	22	24	22	31	17	29	21	21	26	21	67	75	65	74
Local:																												
Nervous system	17	9	10	7	23	13	13	8	66	35	32	30	24	14	11	15	21	14	13	21	19	12	11	13	64	40	35	49
Circulatory organs	9	7	4	4	12	8	5	7	26	20	14	14	13	2	3	7	8	6	4	4	8	6	4	12	29	14	11	23
Respiratory organs	19	21	24	21	29	23	23	22	65	58	77	64	15	12	18	15	5	4	12	6	6	6	3	2	26	22	33	23
Digestive organs	12	7	4	4	14	8	1	6	34	19	9	15	12	9	6	4	3	6	5	5	12	20	18	12	27	35	29	21
Urinary organs	4	7	2	....	4	6	5	3	18	16	9	3	4	2	1	2	6	1	1	3	6	4	2	1	16	7	4	6
Generative organs	....	1	....	....	....	....	....	1	....	2	....	1	....	2	....	1	....	1	....	1	....	2	....	....	....	5	....	2
Osseous and locomotory	....	....	1	....	....	....	....	2	....	....	1	3	....	....	....	1	1	....	1	....	1	....	1	....	2	....	2	1
Integumentary	....	1	....	....	1	1	1	....	1	2	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....
Total local diseases	61	53	45	36	83	59	48	49	210	152	143	180	68	42	39	45	44	32	36	40	52	50	39	40	164	124	114	125
Developmental:																												
Infants	2	2	5	3	5	5	10	5	17	11	25	14	10	2	1	4	5	4	1	3	9	2	6	12	24	8	8	19
Women	....	1	....	2	....	4	....	....	....	7	....	3	....	1	....	3	....	4	....	3	....	3	....	2	....	8	....	8
Old age	2	2	1	7	2	2	2	6	9	14	5	20	9	5	7	6	....	9	....	6	3	7	5	2	12	21	12	14
Nutrition	....	1	....	1	....	1	....	1	....	2	....	2	....	1	....	1	....	2	....	....	....	....	....	....	....	3	....	1
Total developmental diseases	4	6	6	13	7	12	12	12	26	34	30	39	19	9	8	14	5	19	1	12	12	12	11	16	36	40	20	42
Violence:																												
Accidents and negligence	2	....	5	4	5	2	4	....	11	2	12	4	2	1	2	....	4	1	3	2	1	1	8	....	7	3	13	2
Judicial executions	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....

Homicides	2						1	2			2				1		1	1			1			1	2	1				
Suicides					3			5				1					1	1		2			4		1					
Wounds received during the late civil war																				1			1							
Total violence	4		5	4	8	2	4	1	18	2	12	6	3	1	2	1	5	2	6	2	4	1	9		12	4	17	3		
SUMMARY.																														
I. Zymotic diseases	18	11	12	11	25	13	13	12	66	37	40	35	12	12	18	16	10	12	7	14	51	32	31	35	73	56	56	65		
II. Constitutional diseases	23	26	25	20	16	35	28	31	66	77	74	86	24	23	22	24	22	31	17	29	21	21	26	21	67	75	65	74		
III. Local diseases	61	53	45	36	83	59	48	49	210	152	143	130	68	42	39	45	44	32	36	40	52	50	39	40	164	174	114	125		
IV. Developmental diseases	4	6	6	13	7	12	12	12	26	34	30	39	19	9	8	14	5	19	1	12	12	12	11	16	36	40	20	42		
V. Violence	4		5	4	8	2	4	1	18	2	12	6	3	1	2	1	5	2	6	2	4	1	9		12	4	17	3		
Grand total from all causes, by sex and color	110	96	93	84	139	121	105	105	386	302	299	296	126	87	89	100	86	96	67	97	140	116	116	112	352	299	272	309		
Total from all causes, by color	206		177		260		210		688		595		213		189		182		164		256		228		651		581			
Percentages, by color, to total mortality	4.00		3.45		5.04		4.08		13.34		11.54		4.12		3.67		3.54		3.18		4.97		4.41		12.63		11.26			
Rate of deaths per 1,000 inhabitants (white and colored).	1.21		2.21		1 53		2.62		4.04		7.44		1.24		2.36		1.07		2.05		1.51		2.85		3.82		7.26			
Grand total from all causes	383				470				1,283				402				346				484				1,232					
Death rate per 1,000 inhabitants (total)	1.532				1.880				5.132				1.608				1.384				1.936				4.928					

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	AGE OF DECEDENT.																								Total	Per cent. of each cause to total mortality under 5 years of age.
	Under 1 year.				1 to 2 years.				2 to 3 years.				3 to 4 years.				4 to 5 years.				Total under 5 years.					
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
RECAPITULATION.																										
Zymotic:																										
Miasmatic diseases	109	83	110	119	36	25	35	40	17	20	8	22	11	11	3	9	11	11	4	8	184	150	160	198	692	33.126
Enthetic diseases	1	2	9	7	....	....	....	....	....	....	....	1	..	..	....	....	....	....	....	....	1	2	9	8	20	.957
Dietic diseases	22	17	37	22	....	....	1	1	....	....	1	..	..	..	....	....	....	....	....	....	22	17	39	23	101	4.835
Parasitic diseases	....	1	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	2	4	.191
Total zymotic diseases	132	103	157	150	36	25	36	41	17	20	9	23	11	11	3	9	11	11	4	8	207	170	209	231	817	39.109
Constitutional:																										
Diathetic	....	..	....	....	1	..	1	....	....	1	....	..	....	1	9	4	....	....	....	....	1	1	1	....	3	.144
Tubercular	31	31	26	36	7	11	17	15	1	2	11	13	....	1	9	4	1	....	4	2	40	45	67	70	222	10.627
Total constitutional diseases	31	31	26	36	8	11	18	15	1	3	11	13	..	1	9	4	1	....	4	2	41	46	68	70	225	10.771
Local:																										
Nervous system	44	31	72	72	5	3	2	7	3	4	4	1	1	3	4	2	4	3	....	....	57	44	82	82	265	12.685
Circulatory organs	3	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	2	1	....	6	.287
Respiratory organs	30	33	57	43	5	9	28	22	8	5	11	12	2	3	4	5	1	2	4	2	46	52	104	84	286	13.692
Digestive organs	39	26	40	26	12	10	14	10	2	2	2	2	1	2	1	1	2	....	....	1	56	40	57	40	193	9.240
Urinary organs	1	....	1	....	..	1	....	....	1	....	....	....	....	....	....	....	1	....	....	1	3	1	1	1	6	.287
Generative organs	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Osseous and locomotory	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2	.095
Integumentary	....	2	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	2	1	....	4	.191
Total local diseases	117	94	171	142	23	23	44	40	14	11	17	15	4	8	10	8	8	5	4	4	166	141	246	209	762	36.477
Developmental:																										
Infants	74	48	60	72	..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	74	48	60	72	254	12.159
Women	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Old age	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	.048
Nutrition	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total developmental diseases	74	49	60	72	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	74	49	60	72	255	12.207
Violence:																										
Accidents and negligence	....	3	9	6	....	....	1	....	....	....	....	....	..	1	1	....	1	....	1	2	1	4	12	8	25	1.196
Judicial executions	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Homicides	....	....	2	3	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	2	3	5	.240
Suicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....
Wounds received during the late civil war	....	....	..	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....
Total violence	....	3	11	9	....	....	1	....	....	....	..	....	-	1	1	....	1	....	1	2	1	4	14	11	30	1.436
SUMMARY.																										
I. Zymotic diseases	132	103	157	150	36	25	36	41	17	20	9	23	11	11	3	9	11	11	4	8	207	170	209	231	817	39.109
II. Constitutional diseases	31	31	26	36	8	11	18	15	1	3	11	13	....	1	9	4	1	..	4	2	41	46	68	70	225	10.771
III. Local diseases	117	94	171	142	23	23	44	40	14	11	17	15	4	8	10	8	8	5	4	4	166	141	246	209	762	36.477
IV. Developmental diseases	74	49	60	72	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	74	49	60	72	255	12.207
V. Violence	....	3	1	9	....	..	1	..	....	....	....	....	..	1	1	....	1	..	1	2	1	4	14	11	30	1.436
Grand total from all causes, by sex and color	354	280	425	409	67	59	99	96	32	34	37	51	15	21	23	21	21	16	13	16	489	410	597	593	2,089	100.000
Total from all causes, by color	634		834		126		195		66		88		36		44		37		29		899		1,190		.....	.....
Percentages, by color, to total mortality	12.30		16 18		2.45		3.79		1.27		1.71		0.70		0.86		0.72		0.56		17.44		23.10		40.54	.....
Rate of deaths per 1,000 inhabitants (white and colored)	3.73		10.42		0.73		2.44		0.39		1.10		0.21		0.55		0.22		0.36		5.28		14.87		.....	.....
Grand total from all causes	1,468				321				154				80				66				2,089				.....	.....
Death-rate per 1,000 inhabitants (total)	5.872				1.284				.616				.320				.264				8.356				.....	.....

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	AGE OF DECEDENT.																											
	5 to 10 years.				10 to 20 years.				20 to 30 years.				30 to 40 years.				40 to 50 years.				50 to 60 years.				60 to 70 years.			
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
RECAPITULATION.																												
Zymotic:																												
Miasmatic diseases	21	32	11	19	17	20	19	26	27	12	17	18	15	13	7	7	11	11	4	6	16	10	5	5	11	10	1	6
Enthetic diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	2	....	....	....	1	....
Dietic diseases	....	....	....	....	....	....	....	1	....	2	....	....	3	....	....	....	5	1	....	....	1	1	....	....	1	....	....	....
Parasitic diseases	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total zymotic diseases	21	32	12	19	17	20	19	27	27	14	17	18	18	13	7	7	16	13	4	6	17	11	7	5	12	10	2	6
Constitutional:																												
Diathetic	1	1	....	....	2	8	....	....	3	....	1	1	2	9	1	4	3	17	1	8	11	23	2	3	9	14	5	4
Tubercular	1	4	10	15	9	21	30	55	42	44	42	64	41	40	35	30	40	12	22	20	26	16	28	11	13	11	8	3
Total constitutional diseases	2	5	10	15	11	29	30	55	45	44	43	65	43	49	36	34	43	29	23	28	37	39	30	14	22	25	13	7
Local:																												
Nervous system	2	5	2	2	4	7	4	5	5	6	9	6	14	8	13	8	38	14	10	12	37	16	13	14	48	22	12	13
Circulatory organs	3	....	1	1	2	2	2	3	3	5	2	4	7	5	5	9	16	11	13	10	21	15	9	11	21	12	9	11
Respiratory organs	4	1	6	6	6	1	6	9	7	4	9	8	14	11	11	15	16	12	13	10	11	13	9	5	21	14	6	4
Digestive organs	4	2	3	2	4	4	1	4	8	14	3	6	5	7	2	3	11	11	3	9	18	13	.	1	17	11	5	3
Urinary organs	1	1	1	....	1	2	1	2	1	5	3	2	9	2	2	4	8	6	5	4	10	10	1	2	16	8	3	1
Generative organs	....	....	....	....	....	1	....	....	....	2	....	1	....	1	1	1	1	2	....	1	....	2	....	2	....	2	1	....
Osseous and locomotory	....	....	....	....	....	....	....	2	....	....	2	1	....	1	..	..	....	....	1	2	....	1	....	2	....	....	1	....
Integumentary	1	....	....	....	....	....	....	1	1	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	1	....	....
Total local diseases	15	9	13	11	17	17	14	26	25	36	28	28	49	36	34	40	90	57	45	48	97	70	32	37	123	70	37	32
Developmental:																												
Infants	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Women	....	....	....	....	....	2	....	5	....	12	....	10	....	11	....	5	....	3	....	3	....	....	....	....	....	....	....	....
Old age	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	2	2	2	5	6	4
Nutrition	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	1	1	3	....	....
Total developmental diseases	..	....	....	..	..	2	..	5	....	12	....	10	....	11	....	6	....	3	..	4	..	1	2	3	3	8	6	4
Violence:																												
Accidents and negligence	3	....	3	....	9	1	5	1	8	1	9	1	4	2	3	2	9	....	5	..	6	1	2	....	2	4	2	1
Judicial executions	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Homicides	....	....	....	....	....	....	1	....	2	....	5	1	....	1	2	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Suicides	....	....	....	....	....	....	....	....	2	....	....	....	3	....	1	....	6	....	....	....	....	....	....	1	....	....	....	....	....	....
Wounds received during the late civil war	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	..	....	....	....	....	1	....	....	....	....	....	....
Total violence	3	...	3	...	9	1	6	1	12	1	15	2	7	3	6	3	15	....	5	....	6	1	2	....	5	4	2	1		
SUMMARY.																														
I. Zymotic diseases	21	32	12	19	17	20	19	27	27	14	17	18	18	13	7	7	16	13	4	6	17	11	7	5	12	10	2	6		
II. Constitutional diseases	2	5	10	15	11	29	30	55	45	44	43	65	43	49	36	34	43	29	23	28	37	39	30	14	22	25	13	7		
III. Local diseases	15	9	13	11	17	17	14	26	25	36	28	28	49	36	34	40	90	57	45	48	97	70	32	37	123	70	37	32		
IV. Developmental diseases	....	....	....	....	....	2	....	5		12	....	10	....	11	....	6	....	3	....	4	....	1	2	3	3	8	6	4		
V. Violence	3	...	3	...	9	1	6	1	12	1	15	2	7	3	6	3	15	....	5	....	6	1	2	....	5	4	2	1		
Grand total from all causes, by sex and color	41	46	38	45	54	69	69	114	109	107	103	123	117	112	83	90	164	102	77	86	157	122	73	59	165	117	60	50		
Total from all causes, by color	87		83		123		183		216		226		229		173		266		163		279		132		282		110			
Percentages, by color, to total mortality	1.69		1.61		2.39		3.53		4.18		4.38		4.43		3.42		5.15		3.16		5.41		2.47		5.46		2.14			
Rate of deaths per 1,000 inhabitants (white and colored)	0.51		1.04		0.72		2.29		1.26		2.82		1.34		2.1		1.57		2.04		1.64		1.65		1.69		1.37			
Grand total from all causes	170				306				442				402				429				411				392					
Death rate per 1,000 inhabitants (total)	680				1.224				1.768				1.608				1.716				1.644				1.568					

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	AGE OF DECEDENT.																SOCIAL RELATIONS.							
	70 to 80 years.				80 to 90 years.				Above 90 years.				Unknown age.				Married.				Single.			
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
RECAPITULATION.																								
Zymotic:																								
Miasmatic diseases	6	4	4	1	2	5	...	1	....	1	....	....	....	....	....	....	53	42	17	18	251	210	206	255
Enthetic diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....	1	.....	1	2	10	8
Dietic diseases	...	....	...	....	....	....	....	....	....	....	....	....	....	....	....	....	7	1	.....	.....	24	19	39	24
Parasitic diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	1	2	2
Total zymotic diseases	6	4	4	1	2	5	....	1	...	1	....	....	....	....	....	....	60	43	18	18	276	232	257	289
Constitutional:																								
Diathetic	10	11	....	5	1	5	....	1	....	....	1	....	....	....	....	....	28	36	10	6	7	19	2	2
Tubercular	2	9	5	6	....	....	....	....	..	...	....	..	....	....	....	....	72	67	71	58	125	115	157	187
Total constitutional diseases	12	20	5	11	1	5	....	1	..	..	1	....	....	....	....	....	100	103	81	64	132	134	159	189
Local:																								
Nervous system	25	18	8	10	9	3	1	3	....	1	....	3	....	....	....	....	83	42	48	25	122	64	100	100
Circulatory organs	19	8	10	13	1	6	....	4	....	....	....	....	....	....	....	....	60	28	30	25	27	15	12	12
Respiratory organs	15	17	6	4	4	5	1	1	1	3	2	..	....	....	....	....	51	30	39	26	80	60	124	108
Digestive organs	7	5	5	2	5	3	3	....	..	....	1	....	....	....	....	....	36	27	14	13	86	61	62	50
Urinary organs	7	1	4	...	1	....	....	....	....	....	....	....	....	....	....	....	36	14	10	11	12	11	7	4
Generative organs	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	.....	3	.....	3	1	1
Osseous and locomotory	2	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	3	2	.....	.....	2	5
Integumentary	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	2	.....	.....	3	2	1	1
Total local diseases	75	49	34	29	20	17	5	8	1	4	3	3	....	....	....	....	268	147	144	105	330	216	309	281
Developmental:																								
Infants	...	....	....	....	..	....	....	....	...	....	....	....	....	....	..	....	.....	.....	.....	.....	74	48	60	72
Women	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	26	.....	15	.....	2	....	8
Old age	19	24	10	16	16	30	11	17	2	5	5	11	....	....	....	....	18	7	16	4	.....	9	1	2
Nutrition	2	1	..	1	....	2	....	....	....	....	....	....	....	....	....	....	1	1	.....	1	1	1	.....	.....
Total developmental diseases	21	25	10	17	16	32	11	17	2	5	5	11	....	....	....	....	19	34	16	20	75	60	61	82
Violence:																								
Accidents and negligence	2	2	1	....	2	1	1	....	....	....	....	....	....	....	....	....	17	7	12	3	25	6	30	9
Judicial executions	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	1	.....

Homicides																	2	1	1	2	1		9	3
Suicides	2																5				6		1	
Wounds received during the late civil war																	1							
Total violence	4	2	1		2	1	1										23	8	13	5	32	6	41	12
SUMMARY.																								
I. Zymotic diseases	6	4	4	1	2	5		1		1							60	43	18	18	276	232	257	289
II. Constitutional diseases	12	20	5	11	1	5		1			1						100	103	81	64	132	134	159	189
III. Local diseases	75	49	34	29	20	17	5	8	1	4	3	3					268	147	144	105	330	216	309	281
IV. Developmental diseases	21	25	10	17	16	32	11	17	2	5	5	11					19	34	16	20	75	60	61	82
V. Violence	4	2	1	..	2	1	1										25	8	13	5	32	6	41	12
Grand total from all causes, by sex and color	118	100	54	58	41	60	17	27	3	10	9	14					472	335	272	212	845	648	827	853
Total from all causes, by color	218		112		101		44		13		23						807		484		1,493		1,680	
Percentages, by color, to total mortality	4.23		2.17		1.96		0.86		0.24		0.45						12.66		9.39		28.97		32.62	
Rate of deaths per 1,000 inhabitants (white and colored)	1.28		1.40		0.60		0.55		0.07		0.03						4.75		6.05		8.79		21.00	
Grand total from all causes	330				145				36								1,291				3,173			
Death-rate per 1,000 inhabitants (total)	1.320				580				144								5.164				12.692			

TABLE I.—*Showing the total number of deaths occurring in the District of Columbia, etc.*—Continued.

Cause of death.	SOCIAL RELATIONS.								NATIVITY.															
	Widow or widower.				Unknown.				District of Columbia.				Other parts of United States.				Foreign.				Unknown.			
	W.		C.		W.		C.		W.		C.		W.		C.,		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
RECAPITULATION.																								
Zymotic:																								
Miasmatic diseases	6	16	4	14	....	....	1	....	207	191	184	217	69	62	43	65	33	15	....	....	1	....	1	5
Enthetic diseases	....	1	1	....	....	....	....	....	1	2	9	8	....	....	3	....	....	....	....	....	....	1	....	....
Dietic diseases	1	1	....	....	....	....	....	....	23	18	39	23	2	3	....	1	6	....	....	....	1	....	....	....
Parasitic diseases	....	....	....	....	....	....	....	....	....	1	1	2	....	....	1	....	....	....	....	....	....	....	....	....
Total zymotic diseases	7	18	5	14	....	....	1	....	231	212	233	250	71	65	47	66	39	15	....	..	2	1	1	5
Constitutional:																								
Diathetic	7	34	....	17	1	....	....	1	14	24	2	7	18	45	10	18	11	20	....	....	....	....	....	1
Tubercular	17	20	19	29	....	....	....	....	88	100	109	154	78	79	133	118	48	23	....	..	....	....	5	2
Total constitutional diseases	24	54	19	46	1	....	....	1	102	124	111	161	96	124	143	136	59	43	....	..	..	....	5	3
Local:																								
Nervous system	33	38	6	33	1	....	....	....	88	72	91	96	87	46	63	61	63	26	..	..	1	....	....	1
Circulatory organs	8	23	10	29	1	....	....	....	24	15	7	13	47	14	45	53	25	27	....	....	....	....	....	....
Respiratory organs	14	43	9	11	....	....	1	1	71	64	114	91	53	48	57	55	20	21	....	....	1	....	2	....
Digestive organs	11	21	7	7	2	1	....	....	74	54	57	45	37	39	26	24	22	17	....	....	2	....	....	1
Urinary organs	9	11	4	1	....	....	....	....	19	8	4	5	29	19	16	10	8	9	....	....	1	....	1	1
Generative organs	....	5	1	1	....	....	....	....	1	....	....	1	....	8	2	4	....	2	....	....	....	....	....	....
Osseous and locomotory	1	....	....	2	....	....	....	....	....	1	1	3	1	1	4	6	1	....	....	....	....	....	....	....
Integumentary	....	1	....	....	....	....	....	....	1	3	1	1	2	....	....	....	....	2	....	....	....	....	....	....
Total local diseases	76	142	37	84	4	1	1	1	278	217	275	255	256	185	213	213	139	104	....	..	5	....	3	3
Developmental:																								
Infants	....	....	....	....	....	....	....	....	74	48	60	72	....	....	....	....	....	....	....	....	....	....	....	....
Women	....	....	....	....	....	....	....	....	....	9	....	6	....	17	....	17	....	2	....	....	....	....	....	....
Old age	21	48	16	45	....	....	1	....	3	6	4	5	24	36	30	46	12	22	....	....	....	....	....	....
Nutrition	1	6	....	2	....	....	....	....	....	3	....	....	3	3	....	3	....	2	....	....	....	....	....	....
Total developmental diseases	22	54	16	47	....	....	1	..	77	66	64	83	27	56	30	66	12	26	....	....	..	....	..	....
Violence:																								
Accidents and negligence	4	3	....	1	....	....	1	..	15	5	19	7	19	8	22	4	12	3	....	1	..	....	2	1
Judicial executions	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....

Homicides									1		4	4	1	1	5	1	1					1		
Suicides	3								2				6		1		6							
Wounds received during the late civil war																	1							
Total violence	7	3		1			1		18	5	23	11	26	9	29	5	20	3		1			3	1
SUMMARY.																								
I. Zymotic diseases	7	18	5	14			1		231	212	233	250	71	65	47	66	39	15			2	1	1	5
II. Constitutional diseases	24	54	19	46	1			1	102	124	111	161	96	124	143	136	59	43					5	3
III. Local diseases	76	142	37	84	4	1	1	1	278	217	275	255	256	185	213	213	139	104			5		3	3
IV. Developmental diseases	22	54	16	47			1		77	66	64	83	27	56	30	66	12	26						
V. Violence	7	3		1			1		18	5	23	11	26	9	29	5	20	3		1			3	1
Grand total from all causes, by sex and color	136	271	77	192	5	1	4	2	706	624	706	760	476	439	462	486	269	191		1	7	1	12	12
Total from all causes, by color	407		269		6		6		1,330		1,466		915		948		460		1		8		24	
Percentages, by color, to total mortality	7.90		5.22		0.12		0.12		25.82		28.45		17.76		18.40		8.93		0.02		0.15		0.47	
Rate of deaths per 1,000 inhabitants (white and colored.)	2.39		3.36		0.03		0.07		7.83		18.32		5.38		11.85		2.70		0.01		0.05		0.06	
Grand total from all causes	676				12				2,796				1,863				461				32			
Death-rate per 1,000 inhabitants (total)	2.704				.048				11.184				7.452				1.844				.128			

TABLE II.—*Location of deaths, year ending June 30, 1889.*

Diseases.	West Washington.		Washington.													
	1st division—west of 32d street.		2d division—east of 32d street.		3d division—south of K street and Vermont avenue northwest.		4th division—north of K street and Vermont avenue northwest.		5th division—north of Massachusetts avenue, east of Vermont avenue, and west of 1st street northwest.		6th division—north of B street south, west of 1st street west, and south of Massachusetts avenue northwest.		7th division—south of B street south, west of 1st street west and Delaware avenue southwest.		8th division—east of Delaware avenue southwest, and south of E street south.	
	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.
Consumption	8	4	10	13	19	21	18	44	35	67	38	11	31	61	19	12
Pneumonia	9	2	3	5	6	13	14	22	18	26	22	11	18	32	13	16
Cholera infantum	3	....	5	3	6	6	6	24	13	14	4	6	21	14	8	12
Scarlet fever	....	....	....	1	2	....	2	....	3	1	1	....	4	....	3	....
Diphtheria	2	....	4	1	2	....	4	....	14	2	4	1	10	....	9	1
Typhoid fever	3	....	6	2	9	3	8	14	13	6	9	5	5	6	8	6
Typho-malarial fever	....	....	....	....	....	....	....	2	1	1	....	....	4	....	6	2
Malarial fever	1	..	....	....	3	3	2	3	3	4	....	2	....	3	....	3
Diarrhœal diseases other than cholera infantum	8	1	4	2	6	5	10	14	12	11	14	3	25	15	10	6
All other diseases	69	22	52	61	96	74	147	212	176	182	229	76	202	219	114	66
Total	103	29	84	88	149	125	211	335	288	314	321	115	320	350	190	124
Percentage to total deaths by colors	3. 80	1. 20	3. 10	3. 61	5. 50	5. 13	7. 78	13. 74	10. 57	12. 87	11. 80	4. 71	11. 80	14. 35	7. 00	5. 08

Diseases.	Washington.				County.				Hospitals and public institutions, and not given.		Total by color.		Grand total.
	9th division—north of E street south, and east of 1st street west, and south of Maryland avenue.		10th division—east of 1st street west, and north of Maryland avenue northeast.		11th division—west of Eastern Branch and north of Boundary.		12th division—east of the Eastern Branch.						
	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	
Consumption	22	27	28	12	17	26	2	10	58	84	305	392	697
Pneumonia	12	12	10	10	17	7	3	8	11	11	156	175	331
Cholera infantum	9	7	13	9	8	18	5	4	1	.....	102	117	219
Scarlet fever	1	....	5	4	3	1	....	....	....	....	24	7	31
Diphtheria	1	3	1	1	3	1	....	1	....	....	54	11	65
Typhoid fever	6	4	8	6	3	4	3	4	15	14	96	74	170
Typho-malarial fever	1	1	2	....	1	3	....	1	1	2	16	12	28
Malarial fever	2	2	3	2	1	....	1	2	2	.....	18	24	42
Diarrhœal diseases other than cholera infantum	10	14	17	10	6	5	4	13	17	16	143	115	258
All other diseases	115	111	158	82	90	96	26	49	325	262	1, 709	1, 512	3, 311
Total	179	181	245	136	149	161	44	92	430	389	2, 713	2, 439	5, 152
Percentage to total deaths by colors	6. 60	7. 42	9. 03	5. 57	5. 31	6. 60	1. 62	3. 77	16. 09	15. 95	100. 00	100. 00	.....

TABLE III.—*Deaths under one year of age, arranged monthly, for year ending June 30, 1889.*

	1 day and under.	1 day to 1 week.	1 week to 1 month.	1 to 2 months.	2 to 3 months.	3 to 4 months.	4 to 5 months.	5 to 6 months.	6 to 7 months.	7 to 8 months.	8 to 9 months.	9 to 10 months.	10 to 11 months.	11 to 12 months.	Total.	Total by color.	Percentage to total mortality under 1 year of age by color.
July, 1888:																	
White males	4	1	4	4	7	5	5	5	2	1	6	4	2	2	52	108	17.04
females	0	5	5	2	3	6	8	4	3	3	6	5	4	2	56		
Colored males	3	5	6	8	7	1	4	9	3	5	3	4	3	4	65	119	14.80
females	4	4	5	6	4	5	4	10	2	3	1	2	3	1	54		
Total	11	15	20	20	21	17	21	28	10	12	16	15	12	9	227	227	
August, 1888:																	
White males	6	5	6	5	3	4	2	3	0	3	7	3	4	3	54	83	13.08
females	3	1	2	6	3	2	4	0	0	1	0	3	4	0	29		
Colored males	2	3	5	5	8	2	3	3	6	6	3	6	3	4	59	127	15.80
females	6	8	3	4	8	6	6	4	5	3	6	5	2	2	68		
Total	17	17	16	20	22	14	15	10	11	13	16	17	13	9	210	210	
September, 1888:																	
White males	3	4	5	3	2	2	1	1	3	4	1	5	2	3	39	62	9.78
females	2	3	1	2	2	1	2	2	2	4	0	1	1	0	23		
Colored males	4	3	6	4	2	0	1	1	2	3	5	1	2	1	35	68	8.46
females	1	2	2	3	4	5	4	1	1	1	3	2	3	1	33		
Total	10	12	14	12	10	8	8	5	8	12	9	9	8	5	130	130	
October, 1888:																	
White males	4	1	1	4	1	1	0	2	0	1	0	1	1	0	17	43	6.77
females	6	4	1	1	2	2	2	0	2	1	1	2	0	2	26		
Colored males	1	3	7	6	2	2	3	0	1	0	1	1	0	0	27	57	7.09
females	2	3	4	3	4	0	3	0	2	0	2	2	0	5	30		
Total	13	11	13	14	9	5	8	2	5	2	4	6	1	7	100	100	
November, 1888:																	
White males	3	3	1	2	4	3	1	2	2	0	0	1	0	1	23	38	6.00
females	3	1	2	1	1	2	2	2	0	0	0	0	0	1	15		
Colored males	2	0	2	1	1	2	1	1	1	0	2	0	0	0	13	36	4.48
females	4	5	6	1	1	1	2	2	1	0	0	0	0	0	23		
Total	12	9	11	5	7	8	6	7	4	0	2	1	0	2	74	74	
December, 1888:																	
White males	1	1	1	3	4	1	0	0	0	0	0	0	0	1	12	34	5.34
females	3	1	2	1	2	1	3	3	2	0	0	4	0	0	22		
Colored males	3	4	9	1	5	2	2	1	1	0	1	1	1	1	32	59	5.47
females	2	2	5	1	2	3	3	3	1	0	1	2	1	1	27		
Total	9	8	17	6	13	7	8	7	4	0	2	7	2	3	93	93	
January, 1889:																	
White males	7	2	2	3	3	1	4	0	0	2	1	0	1	1	27	39	6.15
females	3	1	0	0	4	0	0	0	1	1	0	0	1	1	12		
Colored males	6	5	6	5	2	2	1	2	0	1	0	1	1	2	34	63	7.83
females	4	1	5	3	2	5	2	4	0	0	2	0	1	0	29		
Total	20	9	13	11	11	8	7	6	1	4	3	1	4	4	102	102	
February, 1889:																	
White males	2	1	1	1	1	0	1	1	2	0	2	0	1	0	13	28	4.38
females	0	0	3	1	2	3	1	1	2	0	1	1	0	0	15		
Colored males	3	4	2	3	0	5	1	0	1	2	2	2	3	1	29	51	6.34
females	1	1	4	6	2	0	1	3	0	1	0	2	1	0	22		
Total	6	6	10	11	5	8	4	5	5	3	5	5	5	1	79	79	
March, 1889:																	
White males	2	3	3	3	1	1	5	2	1	0	2	1	1	1	26	46	7.34
females	2	3	4	1	1	1	0	1	1	3	2	0	0	1	20		
Colored males	8	4	2	2	2	6	2	0	0	2	1	1	0	2	32	53	6.59
females	2	3	3	0	3	0	2	1	1	1	2	1	0	2	21		
Total	14	13	12	6	7	8	9	4	3	6	7	3	1	6	99	99	

TABLE III.—*Deaths under one year of age, arranged monthly, etc.*—Continued.

	1 day and under.	1 day to 1 week.	1 week to 1 month.	1 to 2 months.	2 to 3 months.	3 to 4 months.	4 to 5 months.	5 to 6 months.	6 to 7 months.	7 to 8 months.	8 to 9 months.	9 to 10 months.	10 to 11 months.	11 to 12 months.	Total.	Total by color.	Percentage to total mortality under 1 year of age by color.
April, 1889:																	
White males	5	3	4	0	0	0	0	0	4	0	1	0	2	0	19	32	5.04
females	0	1	1	1	2	2	2	1	1	0	2	0	0	0	13		
Colored males	0	1	5	0	7	2	1	1	4	0	4	1	1	1	28	52	6.47
females	3	2	4	1	2	0	2	3	3	0	1	0	2	1	24		
Total	8	7	14	2	11	4	5	5	12	0	8	1	5	2	84	84	
May, 1889:																	
White males	3	2	3	3	0	0	0	1	0	0	0	0	0	0	12	23	3.62
females	4	0	1	2	1	1	0	0	1	1	0	0	0	0	11		
Colored males	1	2	0	2	1	0	3	0	0	2	1	2	2	1	17	43	3.61
females	1	6	2	1	1	4	4	1	3	1	1	0	0	1	26		
Total	9	10	6	8	3	5	7	2	4	4	2	2	2	2	66	66	
June, 1889:																	
White males	3	1	8	3	4	9	4	5	2	4	6	4	4	3	60	98	15.46
females	0	1	3	2	4	6	3	0	4	4	3	3	2	3	38		
Colored males	1	4	4	3	7	3	6	5	5	5	2	3	6	0	54	106	13.06
females	2	7	8	2	7	3	5	4	5	4	0	1	2	2	52		
Total	6	13	23	10	22	21	18	14	16	17	11	11	14	8	204	204	

RECAPITULATION.

Age.	Grand total.	Per cent. to total mortality under 1 year.	Total white males.	Per cent. to total mortality under 1 year.	Total white females.	Per cent. to total mortality under 1 year.	Total colored males.	Per cent. to total mortality under 1 year.	Total colored females.	Per cent. to total mortality under 1 year.
1 day and under	135	9.19	43	12.14	26	9.28	34	8.00	32	7.82
1 day to 1 week	130	8.85	27	7.62	21	7.50	38	8.94	44	10.76
1 week to 1 month	169	11.55	39	11.02	25	8.92	54	12.70	51	12.47
1 to 2 months	125	8.51	34	9.61	20	7.15	40	9.41	31	7.58
2 to 3 months	141	9.60	30	8.48	27	9.63	44	10.35	40	9.78
3 to 4 months	113	7.70	27	7.62	27	9.63	27	6.35	32	7.82
4 to 5 months	116	7.90	23	6.50	27	9.63	28	6.59	38	9.30
5 to 6 months	95	6.47	22	6.21	14	5.00	23	5.41	36	8.80
6 to 7 months	83	5.65	16	4.52	19	6.80	24	5.65	24	5.87
7 to 8 months	73	4.97	15	4.23	18	6.45	26	6.12	14	3.42
8 to 9 months	85	5.79	26	7.34	15	5.36	25	5.89	19	4.65
9 to 10 months	78	5.31	19	5.38	19	6.80	23	5.41	17	4.16
10 to 11 months	67	4.56	18	5.10	12	4.28	22	5.18	15	3.66
11 to 12 months	58	3.95	15	4.23	10	3.57	17	4.00	16	3.91
Total	1,468	100.00	354	100.00	280	100.00	435	100.00	409	100.00
Total by color				634				834		
Percentage to total mortality under one year of age, by color				43.2				56.8		

TABLE IV.—DEATHS.—*Number of deaths of children under five years of age from the principal diseases of children, year ending June 30, 1889.*

Diseases.	White.		Colored.	
	Deaths.	Percentage to total mortality of whites under 5 years of age.	Deaths.	Percentage to total mortality of colored under 5 years of age.
Measles	1	.111	2	.168
Croup	25	2.781	15	1.260
Diphtheria	25	2.781	3	.252
Scarlet fever	15	1.667	3	.252
Typo-malarial fever	2	.222	3	.252
Diarrheal diseases, except cholera infantum	93	10.346	94	7.899
Whooping-cough	55	6.117	99	8.319
Inanition	39	4.339	61	5.126
Scrotula, tuberculosis, marasmus, tabes, hydrocephalus and tubercular meningitis	75	8.342	78	6.555
Phthisis pulmonalis	7	.779	52	4.370
Acute diseases of the brain	43	4.783	24	2.017
Convulsions	41	4.561	88	7.395
Trismus nascentium	11	1.223	48	4.034
Bronchitis and congestion of the lungs	35	3.893	80	6.723
Pneumonia	59	6.563	101	8.487
Diseases of the digestive organs	96	10.679	97	8.151
Developmental diseases of children	122	13.570	132	11.092
Accidents and negligence	5	.556	20	1.680
All others	150	16.685	190	15.968
Total	899	100.000	1,190	100.000
Percentage to total mortality, by color	.....	43.04	.....	56.96
Annual death-rate, by color	.....	5.29	.....	14.88

TABLE V.—*Number dying seventy years of age and over, during the year ending June 30, 1889.*

Age.	White.		Colored.		Total.	Age.	White.		Colored.		Total.
	Male.	Female.	Male.	Female.			Male.	Female.	Male.	Female.	
70 years	14	14	18	22	68	87 years	1	3	2	3	9
71 years	10	6	2	1	19	88 years	1	3	1	2	7
72 years	15	14	5	5	39	89 years	1	2	1	1	5
73 years	15	7	6	3	31	90 years	2	5	1	3	11
74 years	10	14	2	1	27	91 years	1	3	1	2	7
75 years	11	15	11	13	50	92 years	.....	.....	.....	.....	.....
76 years	10	8	3	4	25	93 years	.....	1	.....	1	2
77 years	17	7	3	1	28	94 years	.....	.....	.....	.....	.....
78 years	9	9	1	5	24	95 years	.....	.....	2	2	4
79 years	7	6	3	3	19	96 years	.....	1	1	1	3
80 years	5	12	7	6	30	97 years	.....	.....	.....	.....	.....
81 years	2	2	1	1	6	98 years	.....	.....	1	.....	1
82 years	12	9	.....	2	23	99 years	.....	.....	1	.....	1
83 years	5	9	2	1	17	100 years and over	.....	.....	2	5	7
84 years	6	7	.....	1	14						
85 years	5	7	1	5	18	Total	162	170	80	99	511
86 years	3	6	2	5	16						

TABLE VI.—*Number and average ages in years of decedents dying from eighteen different diseases, and from suicide during the year ending June 30, 1889.*

Diseases.	White.				Colored.			
	Male.		Female.		Male.		Female.	
	Total deaths.	Years.	Total deaths.	Years.	Total deaths.	Years.	Total deaths.	Years.
Consumption	157	38	148	36	188	29	204	25
Typhoid fever	53	30	43	26	41	20	33	15
Apoplexy	46	70	22	59	22	56	26	59
Insanity	72	55	18	56	10	45	10	52
Softening of the brain	9	60	6	58	4	47	1	70
Paralysis	10	58	16	63	10	56	15	60
Cancer	26	59	73	55	2	57	18	51
Epilepsy	0	.....	3	32	4	50	1	29
Diseases of the heart	91	53	63	54	48	50	62	52
Bright's disease	20	50	6	37	8	43	5	44
Rheumatism	14	43	11	39	6	53	3	59
Aneurisms	2	45	2	50	3	43	1	49
Angina pectoris	2	71	1	55	1	60	2	50
Gastritis	14	44	16	34	4	51	9	36
Cirrhosis of liver	9	50	0	.....	2	50	1	42
Dropsies	4	32	7	20	6	32	8	35
Diabetes	5	60	5	45	1	66	1	32
Hernia	3	64	0	.....	6	43	0	.....
Suicides	14	45	0	.....	1	31	0	.....

TABLE VII.—DEATHS.—*Number of deaths occurring in hospitals and other public institutions during the year ending June 30, 1889.*

Hospitals, etc.	White.		Colored.		Total.
	Male.	Female.	Male.	Female.	
Barnes Hospital, Soldiers' Home	35	.....	2	.....	37
Capitol Park	1	.....	.....	.....	1
Children's Hospital	.....	1	8	7	16
Columbia Hospital	4	9	4	5	22
Emergency Hospital	3	.....	1	.....	4
Freedmen's Hospital	20	6	134	95	255
Garfield Memorial Hospital	20	9	.....	2	31
German Orphan Asylum	.....	2	.....	.....	2
Government Hospital for the Insane	75	20	10	8	113
Hammond Sanitarium	1	.....	.....	.....	1
Home for Colored Orphans	.....	.....	3	3	6
Home for the Aged	12	8	1	13	34
Jail, U. S. (execution)	.....	.....	1	.....	1
Louise Home	.....	2	.....	.....	2
National Homeopathic Hospital	5	4	.....	.....	9
Naval Hospital	3	.....	.....	.....	3
Police station	1	.....	1	.....	2
Providence Hospital	69	32	8	3	112
St. Ann's Infant Asylum	15	19	15	9	58
War Department Building	1	.....	.....	.....	1
Washington Asylum Hospital	14	4	25	19	62
Washington Asylum for Foundlings	15	17	.....	.....	32
Washington Barracks	1	.....	1	.....	2
Washington Industrial Home School	.....	1	.....	.....	1
Unknown and not stated	1	.....	7	4	12
Total	296	134	221	168	819

TABLE VIII.—DEATHS.—*Deaths and average ages year ending June 30, 1889.*

WHITE MALES.

Months.	All ages.				5 years and over.				20 years and over.				40 years and over.			
	Total deaths.	Average ages.			Total deaths.	Average ages.			Total deaths.	Average ages.			Total deaths.	Average ages.		
		Years.	Months.	Days.		Years.	Months.	Days.		Years.	Months.	Days.		Years.	Months.	Days.
1888.																
July	129	23	7	27	63	47	7	18	56	52	4	14	42	60	0	5
August	167	28	5	4	93	50	5	8	88	52	4	16	67	59	7	11
September	114	25	3	0	62	45	8	7	57	48	5	0	41	57	0	0
October	109	31	8	1	84	40	10	18	64	50	1	25	44	59	3	22
November	105	29	10	6	70	44	3	19	58	53	8	29	47	59	1	4
December	96	39	6	4	79	47	10	15	73	50	10	12	50	62	2	3
1889.																
January	137	34	8	10	97	48	7	15	92	50	1	14	70	57	9	24
February	110	39	11	3	91	48	0	0	82	52	1	12	62	60	3	3
March	139	36	6	10	102	49	5	10	93	54	11	5	70	63	7	7
April	1 6	40	0	0	94	52	8	1	87	56	8	5	69	62	11	15
May	86	40	0	0	71	48	0	15	64	52	0	3	43	61	8	6
June	140	23	0	0	63	50	1	17	59	52	11	5	43	59	4	22
Totals and means	1,458	32	8	15	969	47	10	17	873	52	2	21	648	59	11	27

WHITE FEMALES.

1888.																
July	143	25	0	13	68	51	8	2	61	56	5	23	42	68	7	3
August	97	22	1	23	48	43	10	8	41	48	7	6	29	59	8	11
September	100	30	1	17	66	45	2	24	57	50	6	14	35	64	5	15
October	118	31	2	24	84	43	3	16	69	49	6	21	45	60	9	11
November	84	34	1	16	62	45	11	0	58	48	8	0	36	61	3	17
December	112	34	8	4	81	46	11	14	69	53	5	22	50	62	5	20
1889.																
January	85	36	11	12	59	52	7	15	51	58	8	2	39	68	4	8
February	96	37	4	4	77	46	4	1	67	51	6	24	48	59	7	14
March	121	35	8	18	92	47	7	28	78	52	9	18	53	63	2	3
April	87	38	11	7	66	50	11	3	59	55	3	0	46	62	11	28
May	96	35	5	27	74	45	7	27	62	51	11	23	43	61	6	9
June	116	30	1	12	68	50	10	7	61	55	2	5	45	62	9	0
Totals and means	1,255	32	7	27	845	47	11	17	733	52	9	20	511	62	10	26

COLORED MALES.

1888.																
July	132	16	5	17	53	40	1	12	42	47	3	25	25	60	8	5
August	131	16	0	0	51	40	0	6	39	48	1	13	26	58	6	6
September	100	20	3	1	46	44	1	3	38	50	10	0	23	64	1	1
October	96	18	9	19	51	34	8	20	39	41	7	6	18	54	9	27
November	64	37	6	9	43	55	4	29	32	47	2	0	21	57	1	0
December	86	24	3	25	44	46	10	3	41	49	7	22	29	58	5	4
1889.																
January	101	21	5	3	49	43	10	6	44	47	7	27	26	60	0	0
February	93	19	6	9	47	37	6	0	35	46	6	11	23	57	1	2
March	105	21	5	2	53	40	10	0	44	47	2	12	24	57	10	0
April	89	30	2	15	54	49	9	0	45	57	0	0	33	66	11	2
May	67	24	5	16	41	39	4	3	36	43	6	24	19	56	10	3
June	116	17	6	12	51	37	8	12	40	44	8	18	22	59	6	27
Totals and means	1,180	22	4	23	583	42	6	5	475	47	7	10	289	59	3	26

TABLE VIII.—DEATHS.—*Deaths and average ages year ending June* 30, 1889—Continued.

COLORED FEMALES.

Months.	All ages.				5 years and over.				20 years and over.				40 years and over.			
	Total deaths.	Average ages.			Total deaths.	Average ages.			Total deaths.	Average ages.			Total deaths.	Average ages.		
		Years.	Months.	Days.		Years.	Months.	Days.		Years.	Months.	Days.		Years.	Months.	Days.
1888.																
July	111	17	1	1	45	41	4	1	32	53	4	16	22	64	8	16
August	148	14	0	26	59	34	8	7	41	43	2	2	21	58	2	26
September	110	18	6	21	58	34	3	29	45	40	1	6	23	53	0	17
October	105	23	1	26	59	41	2	3	44	49	10	16	26	65	4	18
November	84	24	2	0	49	40	9	26	37	50	0	9	22	62	4	8
December	96	18	10	25	47	37	5	3	38	43	0	0	18	59	2	11
1889.																
January	107	22	5	23	56	41	8	21	40	53	3	0	26	66	11	15
February	84	24	4	17	49	41	0	15	41	46	9	0	25	59	9	18
March	105	27	7	10	67	43	0	23	53	50	3	25	36	60	0	0
April	100	24	0	19	58	40	4	10	45	49	0	20	24	64	10	10
May	97	25	6	2	65	37	10	2	47	48	0	0	25	65	7	5
June	112	18	10	0	54	38	6	10	46	42	8	23	25	55	4	9
Totals and means	1,259	21	6	24	666	39	4	10	509	47	5	17	293	61	3	15

RECAPITULATION.

		All ages.				5 years and over.				20 years and over.				40 years and over.			
		Total deaths.	Average ages.			Total deaths.	Average ages.			Total deaths.	Average ages.			Total deaths.	Average ages.		
			Years.	Months.	Days.		Years.	Months.	Days.		Years.	Months.	Days.		Years.	Months.	Days.
White	Male	1,458	32	8	15	969	47	10	17	873	52	2	21	648	59	11	27
	Female	1,255	32	7	27	845	47	11	17	733	52	9	20	511	62	10	26
Total		2,713	32	8	6	1,814	47	11	2	1,606	52	6	5	1,159	61	5	11
Colored	Male	1,180	22	4	23	583	42	6	5	475	47	7	10	289	59	3	26
	Female	1,259	21	6	24	666	39	4	10	509	47	5	17	293	61	3	15
Total		2,439	21	11	24	1,249	40	11	8	984	47	6	13	582	60	3	22
White		2,713	32	8	6	1,814	47	11	2	1,606	52	6	5	1,159	61	5	11
Colored		2,439	21	11	24	1,249	40	11	8	984	47	6	13	582	60	3	22
Grand total		5,152	27	3	15	3,063	44	5	5	2,590	50	0	9	1,741	60	10	17

TABLE IX.—*Cemeteries, and decedents buried in each, including those buried outside of the District of Columbia, for the year ending June 30, 1889.*

Cemeteries.	White.	Colored.	Total.
Adas-Israel	6	.....	6
Addison's Chapel	.....	2	2
Baptist Cemetery	.....	10	10
Belt Farm Burial Ground	.....	1	1
Brightwood	.....	5	5
Congressional Cemetery	443	1	444
Convent Cemetery of Georgetown	1	.....	1
Epiphany Church Home	1	.....	1
Georgetown College Cemetery	1	.....	1
Glenwood Cemetery	280	.....	280
Graceland Cemetery	84	396	480
Harmonia Burial Ground	1	358	359
Hillsdale Cemetery	.....	28	28
Holyrood Cemetery	119	25	144
Hospital Cemetery of Government Insane Asylum	23	3	26
Industrial Home School	1	.....	1
Jones's Chapel	.....	5	5
Macedonia Cemetery	.....	7	7
Medical Museum (Army)	5	7	12
Methodist Cemetery, of Tennallytown	48	3	51
Mount Olivet Cemetery	573	185	758
Mount Pleasant Cemetery	.....	498	498
Mount Zion Cemetery	.....	148	148
Moore's Cemetery, of Hillsdale	.....	39	39
National Cemetery at Arlington	21	6	27
National Cemetery at Soldiers' Home	39	2	41
Oak Hill Cemetery	196	.....	196
Outside of the District of Columbia	423	150	573
Payne's Burial Ground, at Benning's	1	186	187
Piney Grove Burial Ground	1	.....	1
Potter's Field	60	368	428
Prospect Hill Cemetery	148	.....	148
Rock Creek Cemetery	175	.....	175
Scaggs's Burial Ground	.....	1	1
Smith's Burial Ground, at Anacostia	.....	2	2
St. Alban's Burial Ground	1	.....	1
St. Ignatius Burial Ground	1	.....	1
St. John's Burial Ground	1	.....	1
St. Philip's Burial Ground	.....	1	1
St. Mary's Cemetery (German)	44	.....	44
Washington Hebrew Cemetery, of Oxen Hill	14	.....	14
Washington Asylum Cemetery	2	2	4
Total	2,713	2,439	5,152

TABLE X.—*Daily mortality, classified by color, different diseases, violence and*

JULY, 1888.

Day of month.	Color.	Mortality.																										
		Total deaths, less those by violence.	Deaths by violence.		Deaths by ages.																							
			Accidents and negligence.	Homicides.	60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days, less those by violence.	One day old and under, less those by violence.	Scarlet fever.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
1	W.	6	.....	...	1	4	...	...	...	...	2	...	...	1	...	...	...	...	...	...	2	1	6	14
	C.	8	.....	...	...	6	1	...	...	...	2	...	...	...	1	...	...	1	...	...	...	3	8	
2	W.	10	.....	...	1	4	...	...	...	...	4	...	...	...	1	...	...	1	2	...	...	...	10	17
	C.	7	.....	...	...	5	...	...	...	...	1	...	...	...	1	...	...	1	1	1	1	1	7	
3	W.	12	.....	...	...	9	...	...	...	2	5	...	...	...	1	...	...	1	...	...	...	3	12	23
	C.	11	.....	...	...	7	...	...	...	...	3	...	...	...	1	...	...	1	2	3	1	1	11	
4	W.	14	.....	...	4	9	2	1	...	...	5	...	...	...	1	...	1	1	3	1	2	14	20
	C.	6	.....	...	1	4	...	...	...	...	1	...	...	...	1	...	...	1	1	2	2	6		
5	W.	9	.....	...	3	5	...	...	...	...	4	...	...	...	...	...	...	...	...	2	3	9	18	
	C.	8	1	...	2	3	1	...	...	...	2	...	...	...	...	...	...	1	1	...	4	9		
6	W.	2	1	...	...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	3	14	
	C.	11	.....	...	...	10	1	...	...	...	5	...	...	...	...	...	...	1	...	3	2	11		
7	W.	13	2	...	4	4	...	...	...	...	...	...	...	...	1	...	...	3	1	1	7	15	24	
	C.	8	1	...	1	4	1	...	...	...	3	1	...	...	...	...	...	1	...	1	2	9		
8	W.	9	2	...	2	7	...	...	...	...	4	...	...	...	...	...	...	5	...	...	...	11	23	
	C.	11	1	...	2	6	1	1	...	...	3	...	...	...	1	...	1	...	1	1	4	12		
9	W.	7	.....	...	3	3	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	4	7	16
	C.	9	.....	...	1	7	2	...	...	...	3	1	...	...	...	...	...	3	...	...	...	2	9	
10	W.	6	.....	...	1	4	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	3	6	13
	C.	7	.....	...	1	4	...	...	...	...	3	...	...	...	1	...	...	1	...	...	...	2	7	
11	W.	8	.....	...	2	5	1	1	...	...	1	...	...	...	...	...	...	...	1	1	5	8	17	
	C.	8	1	...	1	5	1	1	...	...	2	...	...	...	...	...	...	1	2	1	2	9		
12	W.	8	.....	...	...	4	1	1	...	...	1	...	...	...	3	1	...	1	...	1	1	8	14	
	C.	6	.....	...	2	2	...	...	...	...	...	...	...	...	1	...	...	2	...	...	3	6		
13	W.	9	1	...	1	7	...	...	...	...	3	...	...	...	...	...	...	...	...	1	5	10	15	
	C.	5	.....	...	...	4	1	...	...	...	2	...	...	...	...	...	...	2	1	...	...	5		
14	W.	13	.....	...	4	5	2	1	...	...	4	...	...	...	1	...	...	2	...	1	5	13	22	
	C.	9	.....	...	1	4	...	...	...	...	1	1	...	1	2	1	...	...	...	2	1	9		
15	W.	4	2	...	1	3	...	...	...	...	2	...	...	...	...	...	...	...	...	1	1	6	17	
	C.	11	.....	...	...	10	1	1	...	...	6	...	...	...	...	...	...	...	1	1	3	11		
16	W.	7	.....	...	...	6	1	...	...	...	5	...	...	...	...	...	...	...	...	1	1	7	14	
	C.	7	.....	...	...	5	...	...	...	...	1	...	...	...	2	...	...	1	...	1	2	7		
17	W.	13	.....	...	4	7	2	...	...	...	1	...	...	...	1	...	...	5	...	1	5	13	19	
	C.	6	.....	...	...	5	...	...	...	...	2	1	...	...	1	...	...	...	...	1	1	6		
18	W.	7	1	...	2	4	...	...	...	...	3	...	...	...	...	...	...	1	...	1	2	8	18	
	C.	10	.....	...	...	6	1	...	...	...	2	...	...	1	2	...	...	...	1	...	4	10		
19	W.	6	.....	...	...	3	...	...	...	...	2	...	...	...	...	...	...	1	1	1	1	6	14	
	C.	8	.....	...	1	5	...	...	...	...	1	...	...	...	...	1	...	...	1	3	2	8		
20	W.	7	.....	...	1	4	...	...	...	...	1	...	...	...	1	1	...	1	...	1	2	7	14	
	C.	7	.....	...	1	1	...	...	...	...	...	...	...	...	2	...	...	...	...	...	5	7		
21	W.	11	.....	...	3	5	...	...	...	1	3	...	1	...	...	...	...	...	1	1	4	11	17	
	C.	6	.....	...	...	4	...	...	...	...	4	...	...	...	...	1	...	...	...	...	1	6		
22	W.	11	.....	...	2	5	...	...	1	...	2	...	...	...	...	...	...	3	1	...	4	11	18	
	C.	7	.....	...	4	2	...	...	...	...	1	...	...	...	1	...	...	4	...	...	1	7		
23	W.	10	.....	...	1	2	...	...	...	...	...	2	...	1	3	...	...	1	...	2	1	10	21	
	C.	11	.....	...	1	8	2	...	...	...	5	...	...	...	...	...	...	2	1	...	3	11		
24	W.	9	.....	...	1	5	...	...	...	...	3	...	...	...	2	...	...	1	...	1	2	9	13	
	C.	4	.....	...	...	1	...	...	...	...	...	...	1	...	1	...	...	1	...	...	1	4		
25	W.	6	.....	...	1	3	...	...	...	...	3	...	...	...	...	...	...	...	1	1	1	6	8	
	C.	2	.....	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	2		
26	W.	10	.....	...	2	5	...	...	...	...	4	1	...	...	...	...	...	...	...	1	4	10	15	
	C.	4	1	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	5		
27	W.	8	.....	...	2	5	...	...	...	1	3	...	...	1	1	...	...	...	...	1	1	8	14	
	C.	6	.....	...	1	2	...	...	...	...	1	1	...	...	...	...	1	1	1	1	...	6		
28	W.	7	.....	...	3	3	...	...	...	1	2	1	...	...	...	...	...	1	1	1	...	7	12	
	C.	5	.....	...	...	2	...	...	...	...	2	...	...	...	2	...	...	...	...	...	1	5		
29	W.	7	.....	...	1	4	...	...	...	...	3	1	...	...	...	1	...	...	...	...	2	7	14	
	C.	7	.....	...	...	4	...	...	...	...	2	...	...	...	2	...	...	1	...	2	...	7		
30	W.	5	.....	...	1	3	1	...	...	...	2	1	...	...	...	...	...	...	...	...	2	5	19	
	C.	13	1	...	1	7	...	...	...	1	4	...	...	...	1	...	...	1	...	1	5	14		
31	W.	9	.....	...	1	1	...	...	...	...	...	1	...	...	3	...	...	2	1	1	1	9	18	
	C.	9	.....	...	2	6	2	2	...	...	2	...	...	1	...	...	...	1	1	...	4	9		
Total	W.	263	9	0	52	140	10	4	1	6	76	7	1	3	19	3	1	0	32	13	26	75	272	515
	C.	237	6	0	24	143	15	...	0	1	65	5	1	3	23	2	4	1	28	15	25	64	243	
Mean		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

ages, also daily meteorological conditions and variations, year ending June 30, 1889.

JULY, 1888.

Meteorological conditions.														
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity (miles).			
29.79	29.90	69	69	70.0	78.0	66.4	11.6	61	57	NW.	N.	20	188	.....	1
30.04	30.05	80	62	68.0	76.4	57.8	18.6	60	56	E.	0	8	84	....	2
30.15	30.06	90	67	69.5	79.7	58.5	21.2	63	62	SE.	SE.	7	92	.....	3
30.07	29.91	86	71	74.0	84.7	63.0	21.7	64	69	S.	SE.	10	139	.....	4
29.88	29.80	89	91	75.0	89.6	70.5	19.1	73	72	SW.	0	20	58	.02	5
29.96	29.92	91	69	76.0	87.0	69.2	17.8	71	67	NW.	W.	12	119	.....	6
29.90	29.78	77	67	82.0	93.7	70.0	23.7	70	73	S.	W.	15	149	.....	7
29.98	29.89	66	60	77.0	86.0	69.8	16.2	63	64	NW.	0	16	103	.....	8
29.84	29.73	93	89	74.0	80.4	67.8	12.6	70	74	SW.	NE.	8	81	.46	9
29.79	29.80	97	76	67.0	77.0	63.5	13.5	64	61	NE.	0	15	116	2.98	10
29.84	29.67	88	69	74.5	87.0	62.0	25.0	67	67	W.	SW.	12	114	.....	11
29.66	29.52	68	66	76.5	90.0	71.5	18.5	70	60	W.	NE.	19	163	*T.	12
29.78	29.85	89	54	67.0	75.0	55.5	19.5	58	55	NW.	NW.	20	168	.39	13
29.96	29.95	75	68	68.5	79.0	58.4	20.6	58	60	NW.	W.	10	107	.....	14
30.00	29.97	85	62	70.5	84.6	60.5	21.1	62	60	0	0	6	60	.....	15
30.02	29.99	81	62	72.5	82.5	60.5	22.0	61	61	E.	E.	10	79	.....	16
30.11	30.08	81	67	71.5	79.0	60.6	18.4	65	60	E.	SE.	10	114	.....	17
30.12	30.01	83	68	70.5	80.9	60.2	20.7	61	63	S.	SE.	12	136	.....	18
30.00	29.93	86	93	72.5	76.0	69.0	7.0	69	70	S.	SE.	7	106	.06	19
29.95	29.97	95	88	73.0	83.0	68.0	15.0	71	71	S.	SE.	8	78	.01	20
30.04	29.98	86	68	73.5	82.2	64.5	17.7	67	65	NE.	E.	11	132	.....	21
29.97	29.89	82	78	74.5	85.0	64.0	21.0	66	70	N.	W.	8	114	.....	22
29.94	29.87	86	72	78.0	90.0	66.0	24.0	70	72	S.	SW.	6	65	.....	23
29.91	29.89	78	75	77.5	89.0	68.0	21.0	70	69	W.	W.	11	83	*T.	24
30.03	29.98	75	59	74.0	83.0	64.8	18.2	63	61	N.	S.	8	92	.52	25
29.98	29.88	68	58	74.0	85.0	64.1	20.9	60	62	S.	SE.	10	101	.....	26
29.89	29.88	67	77	72.5	81.6	67.0	14.6	62	64	SW.	E.	12	92	.....	27
30.01	30.03	81	64	72.0	79.7	63.0	16.7	63	62	NE.	E.	12	106	.01	28
30.09	30.03	74	71	71.9	76.8	64.0	12.8	61	62	SE.	SE.	8	109	*T.	29
30.01	29.93	85	95	69.0	72.5	66.0	6.5	63	69	S.	S.	11	123	*T.	30
29.95	29.83	98	87	74.5	86.1	68.8	17.3	71	74	SW.	S.	12	95	.02	31
928.66	926.97	2,549	2,226	22.60	2,557.4	2,002.9	554.5	2,020	2,013	.....	.....	.....	3,366	4.47	
29.957	29.902	82.2	71.8	72.9	82.5	64.6	17.9	62.5	64.9	S.	SE.	.....	108.6	.144	

* Trace of rain.

TABLE X CONTINUED.—AUGUST, 1888.

Day of month.	Color.	Mortality.																													
		Total deaths, less those by violence.	Deaths by violence.			Deaths by ages.						Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
			Accidents and negligence.	Homicides.	Suicides.	60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days old, less those by violence.	One day old and under, less those by violence.																						
1	W.	11	1	...	...	2	5	...	...	...		3	1	...	...	1	...	...	...	...	...	1	5	12							
	C.	13	..	...	...	3	5	1	...	...		4	1	...	...	1	...	...	...	2	1	..	2	13	25						
2	W.	7	...	...	1	2	3	...	...	...		1	1	...	2	...	...	...	...	...	...	1	2	8							
	C.	6	...	...	...	1	3	1	...	...		2	...	...	...	3	...	...	...	...	...	...	1	6	14						
3	W.	10	...	...	...	...	8	...	...	...	1	4	...	...	...	...	...	...	...	1	...	2	2	10							
	C.	8	...	...	...	...	6	2	1	...		3	...	...	...	...	...	...	...	1	...	...	4	8	18						
4	W.	11	...	...	...	3	7	...	...	...		6	...	...	...	1	...	...	...	1	...	...	3	11							
	C.	18	...	1	...	1	12	3	2	...		3	1	1	...	3	...	...	...	6	...	...	4	19	30						
5	W.	15	1	...	...	3	10	...	...	...		3	...	...	...	2	...	...	1	1	...	2	6	16							
	C.	16	...	...	...	1	13	1	1	...		7	...	...	...	1	2	...	...	1	...	2	3	16	32						
6	W.	11	1	...	...	2	4	2	2	...		...	1	...	...	2	...	...	...	2	...	1	5	12							
	C.	2	...	...	...	...	1	...	...	...		...	...	...	...	1	...	...	...	...	...	...	...	2	14						
7	W.	12	1	...	...	3	4	...	...	...		6	...	...	...	...	1	...	...	2	...	1	1	13							
	C.	11	...	...	...	...	9	...	...	...		5	...	...	...	1	...	1	...	1	...	...	3	11	24						
8	W.	12	...	...	...	1	6	...	...	...		3	...	...	...	1	...	...	1	2	1	3	1	12							
	C.	14	...	...	...	...	8	1	...	...		4	1	...	1	2	...	...	...	4	...	...	2	14	26						
9	W.	8	1	...	...	1	3	...	...	...		2	1	...	...	1	...	...	...	...	...	3	1	9							
	C.	8	1	...	...	2	6	...	...	...		1	...	...	...	...	...	...	...	3	1	1	2	9	18						
10	W.	9	...	...	...	1	5	...	...	...		2	...	...	...	1	...	...	...	2	...	2	2	9							
	C.	9	...	...	...	1	2	...	...	...		...	1	...	...	...	...	...	...	4	...	1	3	9	18						
11	W.	7	1	...	...	...	3	1	1	...		1	...	...	...	3	...	...	...	...	...	2	1	8							
	C.	5	...	...	...	...	4	...	...	...		2	1	...	...	...	1	...	...	...	...	1	...	5	13						
12	W.	2	...	...	...	...	...	...	...	...		1	...	...	...	...	...	...	...	1	...	...	...	2							
	C.	11	...	...	...	...	8	2	2	...		3	1	1	...	...	...	...	...	1	...	1	4	11	13						
13	W.	10	...	...	...	3	6	1	...	...		2	...	...	...	...	...	...	...	2	...	2	4	10							
	C.	8	...	...	...	...	4	1	...	...		1	...	1	1	1	...	...	...	1	1	...	2	8	18						
14	W.	8	...	...	...	2	3	...	...	...		3	...	...	...	...	...	...	...	...	1	1	3	8							
	C.	2	...	1	...	...	2	...	...	...		2	...	...	...	...	...	...	...	...	...	...	...	3	11						
15	W.	3	...	...	...	...	1	1	...	...		...	...	...	...	1	...	...	...	...	1	...	1	3							
	C.	10	1	...	...	...	8	...	...	...		3	...	...	...	1	1	...	...	1	...	1	1	11	14						
16	W.	11	...	...	...	1	6	...	...	...		3	1	...	...	...	...	...	...	2	...	1	4	11							
	C.	10	...	...	...	1	4	...	...	...		...	1	...	...	1	1	...	...	...	...	1	6	10	21						
17	W.	9	...	...	...	3	5	1	1	...		3	...	...	...	1	...	...	...	1	2	2	...	9							
	C.	15	...	...	...	1	10	1	...	...		4	3	...	2	...	...	...	1	...	...	1	4	15	24						
18	W.	3	1	...	...	...	1	...	...	...		...	...	...	1	...	...	...	...	1	...	1	...	4							
	C.	9	...	...	...	...	7	...	...	...		3	...	...	1	1	...	...	...	...	...	...	4	9	13						
19	W.	14	1	...	...	2	5	2	1	...		3	...	...	...	1	...	...	...	2	2	2	4	15							
	C.	4	...	...	...	2	2	...	...	...		1	...	...	...	1	...	...	...	...	1	1	...	4	19						
20	W.	9	...	...	...	1	5	...	...	...		1	...	...	...	1	...	...	...	...	2	2	3	9							
	C.	7	...	...	...	...	1	...	...	...		...	1	1	...	4	...	...	...	1	...	...	...	7	16						
21	W.	6	1	...	...	2	2	...	...	...		...	...	...	...	...	...	...	1	2	...	1	2	7							
	C.	9	...	...	...	1	4	1	...	...		3	...	...	...	1	...	...	1	2	...	...	2	9	16						
22	W.	5	...	...	...	...	4	...	...	...		1	...	...	...	...	...	...	...	...	...	2	2	5							
	C.	7	...	...	...	...	5	1	1	...		3	...	...	...	2	...	...	...	...	...	...	2	7	12						
23	W.	3	...	...	...	...	2	...	...	...		2	...	...	...	...	...	...	...	...	...	...	1	3							
	C.	12	...	...	...	...	8	1	1	...		2	...	...	...	1	...	...	...	3	...	2	4	12	15						
24	W.	7	...	...	...	1	4	2	1	1		...	...	...	...	1	...	...	...	1	...	1	3	7							
	C.	6	...	...	...	1	2	...	...	...		2	...	...	...	...	...	...	...	1	...	1	2	6	13						
25	W.	7	...	...	...	1	3	...	...	...		1	1	1	...	...	...	...	...	2	...	...	2	7							
	C.	3	...	...	...	...	2	...	...	...		1	...	...	...	1	...	...	...	...	...	1	...	3	10						
26	W.	7	1	...	...	2	1	1	1	...		...	1	...	...	...	...	1	...	1	...	1	3	8							
	C.	12	...	...	...	2	7	...	...	...		3	1	...	...	3	1	...	...	3	...	1	...	12	20						
27	W.	5	...	...	...	...	2	2	1	...		...	1	...	...	1	...	...	...	1	1	...	1	5							
	C.	5	...	...	...	...	4	...	...	...		1	...	...	...	...	...	...	...	2	1	...	1	5	10						
28	W.	10	...	...	...	4	3	1	1	...		2	...	...	...	...	1	...	...	2	...	2	3	10							
	C.	7	...	...	...	...	5	...	...	...		3	1	...	...	...	...	...	...	...	1	1	1	7	17						
29	W.	6	...	...	...	1	4	...	...	...		1	...	...	...	...	...	...	1	...	...	1	3	6							
	C.	5	...	...	...	2	3	...	...	...		...	...	...	...	1	1	1	...	1	...	...	1	5	11						
30	W.	7	1	...	...	1	4	1	...	...		2	1	...	...	...	...	...	...	1	...	1	3	8							
	C.	15	...	...	...	2	9	1	...	...		3	...	...	1	2	...	...	1	1	...	1	6	15	23						
31	W.	7	...	...	...	1	2	...	...	...		...	1	...	1	2	...	...	1	...	...	2	...	7							
	C.	8	...	...	...	1	6	2	1	...		2	...	...	1	...	1	...	2	...	...	...	2	8	15						
Totals	W.	252	11	0	1	43	121	15	9	2		56	10	1	4	20	2	1	3	31	11	1	39	71	264						
	C.	275	2	2	0	22	170	19	9	0		71	13	3	6	33	8	3	2	40	8	1	18	69	279	543					
Mean																															

TABLE X CONTINUED.—AUGUST, 1888.

Meteorological conditions.															
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles.			
29.87	29.85	91	88	77.5	86.4	71.7	14.7	72	76	SW.	SW.	9	80	*T.	1
29.95	29.87	80	69	76.5	86.4	68.8	17.6	68	67	N.	S.	7	91	.....	2
29.94	29.84	95	74	75.5	88.8	65.5	23.3	68	73	E.	SE.	7	67	.28	3
29.80	29.69	85	69	81.0	96.0	72.8	23.2	73	73	S.	W.	11	85	.....	4
29.74	29.72	71	75	80.5	92.2	74.3	17.9	71	72	W.	E.	15	71	*T.	5
29.77	29.74	87	73	81.0	92.0	74.2	17.8	74	74	S.	SW.	7	79	.01	6
29.81	29.82	84	58	84.5	93.3	75.2	18.1	78	70	W.	W.	10	91	.....	7
29.85	29.84	75	91	78.0	97.2	69.8	27.4	74	70	W.	SE.	40	84	.78	8
29.92	29.97	95	72	78.0	89.0	70.8	18.2	75	70	SW.	NW.	12	92	.01	9
30.14	30.11	77	59	73.5	82.8	65.5	17.3	63	61	NE.	E.	12	109	.....	10
30.17	30.11	82	63	74.0	83.6	61.8	21.8	66	62	SE.	SE.	8	95	.....	11
30.04	29.90	88	87	72.0	87.8	67.8	20.0	71	66	S.	E.	24	129	.14	12
29.92	29.96	74	66	69.0	77.8	65.4	12.4	59	58	W.	NW.	14	170	.25	13
30.10	30.03	76	68	70.5	79.8	60.0	19.8	59	63	NW.	S.	8	97	.....	14
30.04	29.96	82	74	76.0	90.3	67.4	22.9	66	72	SW.	SE.	8	88	.....	15
30.02	29.94	91	71	81.0	94.0	73.9	20.1	75	74	SE.	SE.	10	97	.....	16
29.92	29.86	79	81	79.0	89.6	73.9	15.7	72	72	S.	SW.	9	109	.03	17
29.94	29.93	89	95	74.5	84.9	71.8	13.1	74	71	SW.	S.	12	63	.17	18
30.00	29.94	98	84	71.0	78.5	66.3	12.2	68	68	N.	.....	8	54	.40	19
29.93	29.88	95	87	73.5	81.0	69.0	12.0	70	72	NW.	E.	5	59	.07	20
29.71	29.34	95	85	76.0	84.4	72.5	11.9	73	73	SW.	SW.	30	172	.89	21
29.74	29.96	86	72	68.0	76.7	63.2	13.5	68	55	NW.	N.	14	180	.07	21
30.09	30.06	84	71	63.0	73.7	53.0	20.7	55	56	NW.	SW.	11	113	.....	23
30.09	29.96	80	69	69.5	82.0	55.6	26.4	60	62	S.	SW.	8	69	.....	24
30.01	29.97	80	66	70.0	86.0	57.3	28.7	60	62	.....	.....	7	53	.....	25
30.00	29.92	78	72	72.5	89.0	58.8	30.2	62	66	.....	SW.	6	58	.....	26
29.89	29.90	88	93	70.0	84.4	67.6	16.8	69	66	SE.	W.	8	71	.17	27
30.02	29.96	76	70	63.5	75.6	57.5	18.1	54	55	N.	NW.	11	117	.....	28
29.95	29.85	78	73	66.5	79.8	51.5	28.3	54	63	S.	S.	7	75	.....	29
29.89	29.86	81	68	72.0	84.0	62.4	21.6	62	65	S.	S.	9	92	.....	30
29.88	29.75	88	66	73.5	82.0	68.2	13.8	70	70	S.	E.	12	86	.08	31
928.14	926.49	2,608	2,329	2,291.0	2,649.0	2,053.5	595.5	2,083	2,077	.....	.....	.....	2,896	3.35	...
29.940	29.887	84.1	75.1	73.9	85.5	66.2	19.2	67.2	67.0	S.	SW.	.....	93.4	.108	...

* Trace of rain.

TABLE X CONTINUED.—SEPTEMBER, 1888.

Day of month.	Color.	Mortality.																															
		Total deaths less those by violence.	Deaths by violence.		Deaths by ages.				Scarlet fever.	Croup.	Diphtheria.	Diarrheal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Pleurisy.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths, by color.	Total deaths.
			Accidents and negligence.	Homicides.	60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days, less those by violence.	One day and under less those by violence.																			
1	W.	7	.....	.....	.....	5	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	4	7	12
	C.	4	1	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	5	
2	W.	6	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	3	6	13
	C.	5	.....	2	.....	4	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	7	
3	W.	4	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	2	4	11
	C.	7	.....	.....	2	3	.....	.....	.....	.....	1	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	2	7	
4	W.	8	.....	.....	1	4	.....	.....	.....	.....	.....	2	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	2	1	8	16
	C.	8	.....	.....	1	6	1	1	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	3	8	
5	W.	8	.....	.....	1	3	1	1	.....	.....	.....	1	1	.....	.....	2	.....	.....	.....	.....	2	.....	.....	.....	2	8	14
	C.	6	.....	.....	.....	2	1	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	.....	1	.....	.....	1	1	6	
6	W.	7	.....	.....	1	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	5	7	16
	C.	8	1	.....	.....	6	1	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	6	9	
7	W.	4	.....	.....	.....	2	..	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	1	4	11
	C.	7	.....	.....	.....	5	.....	..	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	3	7	
8	W.	7	.....	.....	.....	4	1	..	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	4	7	13
	C.	6	.....	.....	1	2	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....	.....	1	1	.....	1	6	
9	W.	6	.....	.....	.....	1	.....	.....	.....	.....	1	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	6	19
	C.	13	.....	.....	3	3	.....	.....	.....	.....	1	1	.....	.....	.....	4	.....	.....	.....	.....	2	1	.....	.....	4	13	
10	W.	6	.....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	2	6	10
	C.	4	.....	.....	.....	3	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	..	4	
11	W.	10	.....	.....	1	3	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	1	.....	.....	1	1	1	1	2	10	15
	C.	5	.....	.....	.....	3	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	5	
12	W.	4	.....	.....	.....	3	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4	13
	C.	9	.....	.....	3	5	.....	.....	.....	.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	1	9	
13	W.	3	.....	.....	.....	3	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3	11
	C.	7	1	.....	1	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	1	2	8	
14	W.	12	.....	.....	2	5	1	.....	.....	.....	.....	4	.....	.....	1	1	.....	.....	.....	.....	1	1	1	..	3	12	19
	C.	7	.....	.....	.....	3	.....	.....	1	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....	1	..	7	
15	W.	9	.....	.....	2	3	.....	.....	.....	.....	.....	3	.....	.....	.....	3	.....	.....	.....	.....	2	.....	.....	.....	1	9	19
	C.	10	.....	.....	.....	6	.....	.....	.....	.....	.....	2	.....	.....	.....	3	.....	.....	.....	.....	2	.....	.....	1	2	10	
16	W.	10	.....	.....	3	1	1	1	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	1	2	.....	.....	1	3	10	22
	C.	11	1	.....	1	6	1	.....	.....	.....	.....	4	.....	.....	.....	3	1	.....	.....	.....	1	1	.....	.....	1	12	
17	W.	9	.....	.....	4	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	3	.....	.....	2	1	9	14
	C.	5	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....	.....	2	5	
18	W.	10	.....	.....	3	3	.....	.....	.....	.....	1	1	1	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1	4	10	12
	C.	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	
19	W.	6	.....	.....	.....	4	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	2	2	6	12
	C.	6	.....	.....	.....	5	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	2	6	
20	W.	8	.....	.....	2	3	1	1	.....	.....	1	2	..	1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	8	17
	C.	9	.....	.....	.....	6	1	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....	2	.....	.....	1	3	9	
21	W.	6	.....	.....	.....	3	2	1	..	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	2	6	10
	C.	4	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	2	4	
22	W.	5	.....	.....	1	3	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	2	5	10
	C.	5	.....	.....	.....	3	1	.....	.....	.....	.....	1	.....	.....	.....	3	.....	.....	.....	.....	1	.....	.....	.....	.....	5	
23	W.	4	.....	.....	1	3	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	..	4	9
	C.	5	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	5	
24	W.	6	.....	.....	1	2	.....	.....	.....	.....	1	.....	.....	.....	1	.....	1	.....	.....	.....	2	.....	.....	.....	1	6	11
	C.	5	.....	.....	.....	3	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	2	5	
25	W.	11	1	.....	1	3	.....	.....	.....	.....	.....	1	1	1	.....	.....	2	.....	.....	.....	2	1	.....	.....	3	12	22
	C.	10	.....	.....	.....	7	2	1	.....	.....	.....	2	1	.....	.....	.....	1	.....	.....	.....	2	.....	.....	1	3	10	
26	W.	10	.....	.....	1	6	.....	.....	.....	.....	.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	1	4	10	15
	C.	5	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	1	.....	.....	.....	1	5	
27	W.	8	.....	.....	1	2	.....	.....	.....	.....	.....	1	.....	.....	.....	3	.....	.....	.....	.....	1	.....	.....	.....	3	8	12
	C.	3	1	.....	.....	3	.....	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	4	
28	W.	6	.....	..	1	3	1	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	4	6	14
	C.	7	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	3	.....	.....	.....	.....	1	.....	.....	.....	2	8	
29	W.	7	.....	.....	1	1	.....	.....	.....	.....	.....	1	1	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	2	7	17
	C.	10	.....	.....	.....	5	.....	.....	.....	.....	.....	2	1	.....	.....	2	.....	1	.....	.....	2	.....	.....	1	1	10	
30	W.	6	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	2	6	15
	C.	9	.....	.....	1	5	1	1	.....	1	.....	.....	.....	.....	1	3	.....	.....	.....	.....	1	.....	.....	.....	3	9	
Totals.	W.	213	1	...	33	84	13	4	..	3	4	25	16	4	6	21	4	3	1	1	28	7	2	18	70	214	424
	C.	202	6	2	16	105	9	4	1	1	5	32	11	1	5	40	6	2	..	..	21	6	1	16	54	210	
Mean...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE X CONTINUED.—SEPTEMBER, 1888.

Meteorological conditions.														
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity—miles.			
29.73	29.80	91	91	72.5	80.3	68.0	12.3	70	69	SW.	NW.	11	96	.14	1
30.00	30.06	79	67	67.5	80.0	63.5	16.5	60	58	N.	NE.	12	123	.....	2
30.11	30.07	79	84	63.5	72.2	57.6	14.6	57	58	NE.	NE.	6	72	.07	3
30.00	29.96	97	95	66.5	71.2	60.0	11.2	63	68	E.	SE.	6	65	.64	4
29.97	30.07	96	88	70.0	81.0	63.0	18 0	67	69	N.	NE.	10	89	*T.	5
30.28	30.35	78	75	59.0	63.6	57.5	6.1	51	62	E.	NE.	14	164	.....	6
30.39	30.27	82	100	57.0	60.3	53.5	6.8	51	58	NE.	NE.	8	138	1.09	7
30.06	29.97	100	96	64.0	69.6	57.0	12.6	60	67	NW.	NW.	6	59	.62	8
29.92	29.77	100	98	71.0	79.6	67.0	12.6	70	72	W.	NE.	7	61	.23	9
29.87	29.88	98	90	66.5	70.5	65.0	5.5	68	62	N.	NE.	12	140	.04	10
29.89	29.84	95	95	64.0	64.2	60.0	4.2	63	62	NE.	NW.	15	242	1.30	11
29.93	29.84	95	79	66.5	84.5	58.0	26.5	60	64	S.	S.	7	91	.07	12
29.87	29.98	77	68	65.5	74.1	61.0	13.1	62	50	NW.	NW.	17	134	.....	13
30.14	30.10	67	76	61.0	72.0	49.8	22.2	48	55	N.	0	8	76	.....	14
30.12	30.02	87	71	64.5	74.4	55.3	19.1	58	57	E.	E.	11	91	*T.	15
29.85	29.79	93	98	71.0	80.5	63.3	17.2	69	70	NE.	S.	30	139	1.62	16
29.86	29.81	95	94	70.5	75.6	66.8	8.8	66	73	NW.	SW.	10	102	.80	17
29.98	29.97	95	92	69.5	80.0	63.5	16.5	66	69	W.	0	6	55	.07	18
30.03	30.00	85	78	68.0	79.5	64.3	15.2	63	61	NW.	NW.	7	62	.....	19
30.04	29.92	87	83	68.5	79.0	57.0	22.0	61	66	NW.	S.	7	67	*T.	20
29.93	29.96	90	74	64.5	76.0	62.5	13.5	62	56	NW.	NW.	12	101	.3	21
30.03	30.02	81	83	61.5	73.0	54.4	18.6	54	58	NW.	N.	7	80	.....	22
30.07	30.03	78	74	60.5	70.5	56.0	14.5	54	54	N.	N.	11	107	.....	23
30.09	30.06	78	76	58.5	65.0	57.2	7.8	52	52	N.	NE.	13	136	.	24
29.91	29.70	83	88	56.0	60.5	53.0	7.5	51	53	NE.	N.	9	130	.09	25
29.61	29.64	82	84	57.5	72.4	49.0	23.4	49	56	W.	NW.	8	99	.....	26
29.73	29.78	88	69	59.5	74.5	48.5	26.0	54	52	S.	N.	5	57	.01	27
29.91	30.04	63	60	53.5	63.6	47.8	15.8	42	38	NW.	NW.	13	135	.....	28
30.04	30.03	73	79	48.0	56.7	44.0	12.7	42	40	NW.	N.	15	126	*T.	29
30.03	29.91	75	54	48.5	58.6	38.8	19.8	37	35	NW.	NW.	11	129	.....	30
899.39	898.64	2567	2463	1894.5	2162.9	1722.3	440.6	1730	1754	.....	.....	....	3166	6.82	
29.980	29.955	85.6	82.1	63.2	72.1	57.4	14.7	57.7	58.5	NW.	NW.	....	105.5	.227	

* Trace of rain.

TABLE X CONTINUED.—OCTOBER, 1888.

Day of month.	Color.	Mortality.																												
		Total deaths, less those by violence.	Deaths by violence.			Deaths by ages.				Scarlet fever.	Croup.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of the lungs.	Pleurisy.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
			Accidents and negligence.	Homicides.	Suicides.	60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days old, less those by violence.	One day old and under, less those by violence.																			
1	W.	5	....	....	....	1	1	....	....	....	....	....	....	....	....	1	1	....	....	1	....	....	....	....	1	2	5	10
	C.	7	....	....	....	....	3	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	4	5	
2	W.	6	....	....	....	1	2	....	....	....	....	....	....	....	....	....	3	....	....	....	....	1	....	1	1	6	14
	C.	6	....	....	....	....	3	1	....	....	....	....	2	....	1	2	....	....	....	....	....	....	....	....	3	8	
3	W.	9	1	1	....	....	3	1	1	....	....	....	....	1	....	....	2	....	....	....	....	1	2	....	1	2	11	20
	C.	8	1	....	....	1	6	....	....	....	....	3	....	....	1	1	1	....	....	....	....	....	....	....	....	2	9	
4	W.	6	1	....	....	....	3	....	....	1	1	....	....	....	....	....	1	....	....	1	....	....	....	....	....	2	7	12
	C.	5	....	....	....	....	1	1	....	....	....	....	....	1	....	....	1	1	....	....	....	1	....	....	....	1	5	
5	W.	6	....	....	....	1	2	....	....	1	....	1	....	....	....	....	2	....	....	....	....	1	....	....	....	1	6	11
	C.	5	....	....	....	1	2	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	3	5	
6	W.	3	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	3	13
	C.	10	....	....	....	2	3	....	....	....	....	1	....	....	....	....	3	1	1	....	....	2	1	....	....	1	10	
7	W.	5	....	....	....	3	2	....	....	....	....	....	....	1	....	1	1	....	....	....	....	....	1	....	....	1	5	14
	C.	9	....	....	....	1	3	1	1	....	....	....	....	1	....	1	....	1	....	....	....	2	....	....	....	4	9	
8	W.	7	....	....	....	2	2	....	....	....	1	1	....	....	....	....	2	....	....	....	....	....	1	....	....	2	7	12
	C.	5	....	....	....	2	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....	2	5	
9	W.	4	2	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	2	6	10
	C.	4	....	....	....	1	....	....	....	....	....	....	....	1	1	....	1	....	....	....	....	1	....	....	....	....	4	
10	W.	7	....	....	....	1	1	1	....	....	....	....	....	2	....	....	3	....	....	....	....	....	....	....	1	1	7	14
	C.	7	....	....	....	1	2	....	....	....	....	1	....	1	....	....	2	1	....	....	....	....	....	....	....	2	7	
11	W.	13	....	....	....	2	7	3	3	....	....	....	....	....	1	1	3	1	....	2	....	....	1	....	....	4	13	21
	C.	8	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....	4	8	
12	W.	11	....	....	....	4	4	1	....	....	....	....	....	1	1	....	1	1	....	....	....	1	....	....	2	3	11	23
	C.	11	1	....	....	1	5	....	....	1	....	1	1	1	....	....	....	....	1	1	....	2	....	....	....	3	12	
13	W.	7	1	....	....	1	1	1	....	....	....	....	....	1	....	....	....	....	....	....	....	4	....	....	1	1	8	14
	C.	6	....	....	....	....	5	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	1	3	6	
14	W.	4	....	....	....	....	3	2	2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	2	4	10
	C.	6	....	....	....	1	5	....	....	....	....	....	2	....	....	....	....	....	....	....	....	2	....	....	1	1	6	
15	W.	8	....	1	....	1	1	1	....	....	....	....	....	....	1	1	....	2	....	....	....	1	1	....	....	2	9	18
	C.	9	....	....	....	1	5	1	1	....	....	....	1	1	....	1	....	....	....	....	....	....	1	....	....	5	9	
16	W.	6	....	....	....	....	2	....	....	....	....	....	....	2	....	....	1	....	....	....	....	2	....	....	1	....	6	13
	C.	7	....	....	....	....	4	....	....	....	....	....	1	1	....	....	....	....	....	2	....	....	....	....	1	2	7	
17	W.	8	1	....	....	2	....	....	....	....	....	....	....	....	....	1	1	2	....	....	2	....	....	....	....	2	9	18
	C.	9	....	....	....	1	4	....	....	....	....	....	1	....	....	....	1	1	....	1	1	....	....	....	1	3	9	
18	W.	8	....	....	....	1	1	....	....	....	1	1	1	....	....	....	....	....	1	....	....	....	1	....	1	2	8	14
	C.	6	....	....	....	....	3	....	....	....	....	....	1	....	....	....	....	1	....	....	....	2	....	....	1	1	6	
19	W.	9	....	....	....	3	2	1	1	....	....	1	2	1	....	....	1	....	....	....	....	1	....	....	1	2	9	19
	C.	9	1	....	....	1	2	1	....	....	....	....	....	....	....	....	1	....	1	....	1	2	1	....	....	4	10	
20	W.	6	....	....	....	1	2	....	....	....	1	1	....	....	....	1	1	....	....	....	1	1	....	....	....	....	6	13
	C.	7	....	....	....	1	4	....	....	....	....	....	....	1	....	....	....	2	1	....	....	1	1	....	....	1	7	
21	W.	5	....	....	....	....	....	....	....	....	....	1	....	1	....	....	1	....	....	....	....	....	....	....	....	2	5	12
	C.	7	....	....	....	1	5	....	....	....	....	....	....	1	....	....	2	....	....	....	....	1	....	....	1	2	7	
22	W.	12	....	....	....	1	4	....	....	1	1	....	2	....	....	....	....	2	1	....	....	1	....	1	3	12	16
	C.	4	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	2	4	
23	W.	6	1	....	....	2	2	1	....	....	....	....	....	1	....	....	1	....	....	....	....	1	....	....	3	7	9
	C.	2	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	2	
24	W.	8	....	....	....	3	2	1	1	....	....	....	....	....	....	....	1	1	1	....	....	2	....	....	....	3	8	12
	C.	4	....	....	....	....	3	....	....	....	....	....	....	1	....	....	....	1	....	....	....	1	....	....	....	1	4	
25	W.	10	....	....	....	1	3	....	....	....	1	....	....	....	1	....	1	....	....	....	....	3	....	....	1	3	10	12
	C.	2	....	....	....	....	....	....	....	....	....	....	3	....	....	....	2	....	....	....	....	....	....	....	....	....	2	
26	W.	6	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	6	12
	C.	6	....	....	....	1	2	....	....	....	....	....	....	....	....	....	1	1	....	....	....	1	....	....	....	3	6	
27	W.	11	....	....	....	2	1	1	1	....	....	....	....	....	....	....	4	2	....	....	....	1	....	....	1	3	11	16
	C.	5	....	....	....	....	4	....	....	....	....	....	....	1	....	....	....	1	1	....	....	....	....	....	....	1	1	5	
28	W.	6	....	....	....	....	2	....	....	....	1	1	1	....	....	....	1	....	....	....	....	....	....	....	....	2	6	14
	C.	8	....	....	....	1	1	....	....	....	....	....	1	....	....	....	3	....	....	....	1	2	....	....	....	1	8	
29	W.	3	....	....	....	1	2	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	1	3	6
	C.	3	....	....	....	....	1	1	....	....	....	....	....	....	....	....	1	....	....	1	....	1	....	....	....	....	3	
30	W.	8	1	....	....	4	2	....	....	....	....	....	....	1	....	....	1	....	1	....	....	1	1	....	1	2	9	13
	C.	4	....	....	....	....	1	1	1	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	2	4	
31	W.	4	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	2	4	13
	C.	8	....	1	....	2	3	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	3	....	....	3	9	
Total	W.	217	8	1	1	39	59	15	10	1	4	7	8	21	5	4	36	10	5	4	1	26	11	1	17	56	227	428
	C.	197	3	1	....	21	90	8	3	..	1	1	12	13	2	6	24	13	5	8	2	28	10	..	8	64	201	
Mean	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	

TABLE X CONTINUED.—OCTOBER, 1888.

Meteorological conditions.															
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity (miles).			
29.68	29.43	81	54	58.0	72.0	46.6	25.4	45	48	S.	SW.	20	202	*T.	1
29.47	29.66	89	62	55.0	67.4	50.4	17.0	56	38	S.	NW.	24	188	.07	2
29.92	30.01	63	67	44.5	53.7	39.2	14.5	32	34	NW.	NW.	18	154	.....	3
30.12	29.96	74	72	48.5	61.4	35.5	25.9	35	45	SW.	S.	12	90	.....	4
29.99	29.91	84	73	55.5	71.4	44.4	27.0	46	51	S.	SE.	9	61	.....	5
29.81	29.63	92	92	60.5	72.9	55.5	17.4	58	59	S.	W.	13	127	.16	6
29.68	29.60	74	76	52.5	64.5	49.0	15.5	43	46	NW.	W.	13	184	.06	7
29.58	29.59	90	77	51.5	61.0	49.5	11.5	49	44	NW.	NW.	14	157	.03	8
29.75	29.85	61	60	43.5	53.0	40.5	12.5	29	31	NW.	NW.	18	191	.....	9
29.98	29.90	77	77	46.0	61.4	36.5	24.9	36	42	SW.	0	10	94	.....	10
29.85	29.50	70	96	44.0	49.0	42.3	6.7	35	44	NE.	NE.	20	210	.05	11
29.57	29.64	93	80	48.0	56.7	43.2	13.5	44	44	SW.	0	15	134	.20	12
29.61	29.70	86	69	50.0	61.3	45.5	15.8	44	43	SW.	NW.	7	100	.01	13
29.78	29.91	76	70	49.0	57.4	40.9	16.5	41	41	W.	NW.	12	118	.....	14
30 01	29.92	76	75	49.5	59.5	42.6	16.9	40	44	NW.	S.	8	79	.....	15
29.92	29.92	97	71	53.5	67.8	49.0	18.8	50	47	S.	S.	11	86	.01	16
29.94	30.06	67	60	53.0	62.6	50.0	12.6	43	38	NW.	NW.	12	141	.....	17
30.21	30.14	72	69	50.0	58.6	39.0	19.6	39	43	NW.	0	12	75	.....	18
29.98	29.74	81	95	58.0	75.0	48.5	26.5	47	61	S.	NW.	12	130	.18	19
29.77	29.93	74	55	48.0	60.0	44.8	15.2	43	29	N.	NW.	24	214	.53	20
30.13	30.25	61	59	43.0	52.3	36.5	15.8	29	30	W.	N.	17	141	.....	21
30.28	30.13	75	86	43.0	53.7	35.2	18.5	32	43	N.	SE.	8	70	.04	22
29.96	29.79	100	100	53.5	58.5	46.5	12.0	50	57	S.	0	7	48	.51	23
29.82	30.04	82	67	53.0	59.8	49.8	10.0	51	40	NW.	SW.	25	169	.25	24
30.22	30.20	85	76	59.0	59.8	39.4	20.4	40	46	SW.	SE.	4	31	.....	25
30.28	30.17	93	94	51.0	54.2	49.2	5.0	48	50	0	E.	11	91	.45	26
30.00	29.90	100	92	56.0	63.3	50.6	12.7	54	56	E.	NW.	9	97	.66	27
29.81	29.91	100	58	52.5	58.5	49.0	9.5	55	36	S.	NW.	24	98	.06	28
29.99	29.86	56	58	49.5	60.0	42.5	17.5	33	36	NW.	W.	24	157	.....	29
30.15	30.24	69	66	47.0	56.6	43.4	13.2	37	36	W.	0	16	90	.....	30
30.30	30.21	88	68	49.0	65.0	37.2	27.8	39	45	0	SE.	15	96	.....	31
927.56	926.70	2,486	2,274	1,565.5	1,888.3	1,372.2	516.1	1,323	1,347	.....	.....	.....	3,833	3.27	
29.921	29.894	80.2	73.4	50.5	60.9	44.3	16.6	42.7	43.5	NW.	NW.	.....	123.3	.105	

* Trace of rain.

TABLE X CONTINUED.—NOVEMBER, 1888.

Day of month.	Color.	Mortality. Total deaths, less those by violence.	Deaths by violence. Accidents and negligence.	Deaths by violence. Homicides.	Deaths by ages. 60 years and over, less those by violence.	Deaths by ages. Under 5 years of age, less those by violence.	Deaths by ages. Under 8 days old, less those by violence.	Deaths by ages. One day old and under, less those by violence.	Scarlet fever.	Croup.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
1	W.	1										1													1	7
	C.	6			2	2	1									2		1		2				1	6	
2	W	7			2	3	2	1								2	1		1	1				2	7	13
	C.	6			1	1	1	1					2		1					2				1	6	
3	W.	4			3															3				1	4	9
	C.	5			2	1							1			1					1		1	1	5	
4	W.	1				1											1								1	6
	C.	4		1		1							1			1								2	5	
5	W.	6	1			4						1	1				1			1			1	1	7	11
	C.	4											1				1			1				1	4	
6	W.	7			1	5				1	1									1				4	7	14
	C.	7			3										1	2		1		1				2	7	
7	W.	8			1	2					1		1			3		1					1	1	8	13
	C.	5				1	1						1		1		1		1					1	5	
8	W.	6			1	2										1							1	4	6	8
	C.	2			1	1													1		1				2	
9	W.	5				1										2				2				1	5	8
	C.	3			1	2																		3	3	
10	W.	11			1	2						1	2		1	1	1			1	2			2	11	16
	C.	5				2					1					2				1			1		5	
11	W.	2			1	1											1				1				2	5
	C.	3				2	2	2					1											2	3	
12	W.	6			1	1	1	1								1				1	1			3	6	13
	C.	7			1	4										2		1			1			3	7	
13	W.	5			1	1									1					1			2	1	5	12
	C.	6	1			3				1						1				1				3	7	
14	W.	7			1	2	1						1			2								4	7	12
	C.	5			1	4	1	1				1					2						1	1	5	
15	W.	10			2	5	1	1		1		1								3				5	10	15
	C.	5				2												1			1		1	2	5	
16	W.	6			1	2	1					1				2				1				2	6	8
	C.	2			1	1	1									1				1					2	
17	W.	4			3				1			1								1				1	4	6
	C.	2			1												1							1	2	
18	W.	2				1						1								1					2	7
	C.	5				2										1							1	3	5	
19	W.	3	1		2													1			1			1	4	9
	C.	5			1	4							1			2								2	5	
20	W.	8	2		3	3	1	1												3	2			3	10	22
	C.	12			1	5				1			1			2	3			1	2			2	12	
21	W.	7	1			2	1						1			2				2			1	1	8	14
	C.	6				2							1		1	1				1				2	6	
22	W.	8			1	2										1	1				1		1	4	8	10
	C.	2				1							1					1							2	
23	W.	6			2	1					2								2				1	1	6	12
	C.	4	2			3	2	1						1						1			1	1	6	
24	W.	8			1	2										1	2			2			1	2	8	15
	C.	7			1	3	1									2				2				3	7	
25	W.	7				3						1				1					1	1	1	2	7	15
	C.	8			2	2							1			1			1		1			4	8	
26	W.	9			1	3				1						1	1			1			1	4	9	15
	C.	6				2	1									2		1	1	1	1				6	
27	W.	11			1	4	1	1								2	1	1		3	2			2	11	14
	C.	3			1											1				1				1	3	
28	W.	8	1		4	3	1	1							1					4	1		1	1	9	15
	C.	6			2	2							1				2			1				2	6	
29	W.	3			2																			3	3	4
	C.	1																						1	1	
30	W.	6	1		1	1										1				2	2		1		7	9
	C.	2				1										1			1						2	
Total	W.	182	7	...	37	57	10	6	1	3	4	8	6		3	23	10	3	3	34	14	1	13	56	189	337
	C.	144	3	1	22	54	11	5	..	2	1	1	13	1	4	25	10	6	5	17	8	..	6	45	148	......
Mean																										

TABLE X CONTINUED.—NOVEMBER, 1888.

Meteorological conditions.														
Daily barometer.		Relative humidity		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity (miles.)			
30.27	30.21	80	70	54.5	71.9	43.9	28.0	44	49	.....	.....	7	38	.....	1
30.12	29.91	88	70	59.5	75.3	50.6	24.7	52	54	S.	S.	15	136	.....	2
29.76	29.98	89	59	56.5	69.7	53.5	16.2	56	40	S.	N.	14	105	*T.	3
30.19	30.20	78	72	48.5	65.0	39.2	25.8	37	44	NW.	S.	7	49	.....	4
30.21	30.07	87	81	54.5	64.5	44.8	19.7	46	54	S.	SS.	6	41	.....	5
29.97	29.82	83	81	60.5	74.0	52.5	21.5	54	56	SE.	S.	10	94	.....	6
29.97	30.12	84	62	60.5	65.7	58.0	7.7	57	46	S.	E.	10	94	*T.	8
30.17	30.02	81	97	54.5	56.7	50.6	6.1	47	55	E.	E.	9	113	.17	7
29.84	29.76	92	97	65.5	69.0	55.0	14.0	63	66	S.	S.	10	129	.13	9
29.58	29.56	97	53	59.5	73.5	52.0	21.5	65	36	S.	NW.	20	201	.08	10
29.84	30.08	52	63	47.0	51.0	43.7	7.3	30	32	NW.	.....	24	167	.....	11
30.22	30.28	76	61	43.0	60.0	34.0	26.0	33	33	.....	....	8	47	.....	12
30.44	30.40	76	61	43.5	62.0	33.3	28.7	29	37	.....	NE.	10	38	.....	13
30.38	30.16	100	82	46.0	60.2	35.5	24.7	37	50	S.	NW.	2	27	.....	14
29.60	29.72	94	88	55.0	58.2	51.4	6.8	54	50	NE.	N.	13	138	1.08	15
29.79	29.94	93	67	50.0	64.3	47.9	16.4	49	38	.....	N.	13	89	.08	16
30.28	30.44	52	53	39.0	47.5	34.5	13.0	21	25	N.	E.	20	142	.....	17
30.61	30.44	62	78	38.5	45.8	32.4	13.4	21	37	NE.	NW.	9	136	.01	18
30.17	30.08	95	85	44.0	49.5	39.0	10.5	41	42	NW.	N.	9	102	1.01	19
30.28	30.37	61	58	40.5	46.3	38.0	8.3	29	29	N.	NE.	17	190	.....	20
30.46	30.34	56	71	30.5	40.7	26.5	14.2	14	25	N.	N.	9	119	.....	21
30.33	30.38	71	50	30.5	41.8	23.9	17.9	18	18	N.	NE.	11	131	.....	22
30.50	30.47	82	80	28.5	35.6	24.5	11.1	20	27	N.	N.	12	165	.....	23
30.38	30.24	81	67	36.5	43.2	29.5	13.7	29	29	N.	.....	9	143	.....	24
30.08	29.80	70	62	35.0	40.0	30.4	9.6	22	25	N.	NW.	30	322	.....	25
29.43	29.41	84	90	32.5	34.0	29.5	4.7	26	31	NW.	NW.	27	411	.36	26
29.56	29.69	66	83	38.0	42.3	32.9	9.4	28	33	NW.	NW.	16	181	.04	27
29.77	29.79	75	84	39.0	41.8	35.0	6.8	31	35	W.	NW.	11	77	.01	28
29.75	29.74	77	62	40.5	47.0	37.0	10.0	31	31	NW.	NW.	10	108	*T.	29
29.78	29.81	72	61	43.5	50.7	37.0	13.7	32	33	W.	NW.	16	107	*T.	30
901.73	901.23	2,354	2,148	1,373.0	1,647.4	1,196.0	451.4	1,116	1,157	.....	.....	.....	3,840	2.97	
30.058	30.041	78.5	71.6	45.8	54.9	39.9	15.0	37.2	38.6	S.	NW.	.....	128.0	.099	

* Trace of rain.

TABLE X CONTINUED.—DECEMBER, 1888.

Day of month.	Color.	Mortality. Total deaths less those by violence.	Death by violence. Accidents and negligence.	Death by violence. Homicides.	Death by violence. Suicides.	Deaths by ages. 60 years and over, less those by violence.	Deaths by ages. Under 5 years, less those by violence.	Deaths by ages. Under 8 days, less those by violence.	Deaths by ages. One day old and under, less those by violence.	Scarlet fever.	Croup.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Pleurisy.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
1	W.	5				1	2	1									1	1								3	5	8
	C.	3				1	1	1									1					1				1	3	
2	W.	6					3										1	1							1	3	6	10
	C.	4				1	2											1				1				2	4	
3	W.	5				3	2					1								1				1		2	5	10
	C	3	2				2									1						1				1	5	
4	W.	6				2	2	1	1									1					1		1	3	6	12
	C.	6					3										3	1				1				1	6	
5	W.	10				4	4	1	1			1						1	1	1		1			1	4	10	17
	C.	7				3	1										1	1				1			1	3	7	
6	W.	4				2								1	1							2					4	15
	C.	11				2	3	1	1							1	1	1		1		1	1		1	4	11	
7	W.	5					2											1	1				1			2	5	9
	C.	3		1			3												1			2					4	
8	W.	6				2	2				1						1	1	1				1			1	6	13
	C.	7					4	2			1						2					3	1				7	
9	W.	11				3	4										1	2	1	1		2	2		1	1	11	18
	C.	7				1	3										1	3				1	2				7	
10	W.	2					1															1				1	2	4
	C.	2					0										2										2	
11	W.	7				1	2									1						3			2	1	7	11
	C.	3	1			1	1											2				1					4	
12	W.	3				1	1												1							2	3	12
	C.	9					5				1		1				2					1	1		1	2	9	
13	W.	3	1			1																			3		4	10
	C.	6					5										1	2				1				2	6	
14	W.	13				6	3				1			1			1					3	1		1	5	13	20
	C.	7				1	2										1	1		1		2				2	7	
15	W.	8				2	2	1	1				1				1	1				1	1		1	2	8	10
	C.	2					1	1	1								1									1	2	
16	W.	8				1	3							1	1			3	1			1				1	8	12
	C.	4				2	1										1					1	1			1	4	
17	W.	7					1			1		1					2	1								2	7	12
	C.	5					2										2	1								2	5	
18	W.	9				3	1	1	1					1			2		1		1	1		2		1	9	11
	C.	2															1					1					2	
19	W.	7				1											3					2			1	1	7	16
	C.	7	2				4	1									1	2				2				2	9	
20	W.	8				4	1							1			1	1	2					1	1	1	8	14
	C.	6				1	3														1	1			1	3	6	
21	W.	7				2	2	1					1	1			2	1				1	1				7	12
	C.	5					5								1			1				2				1	5	
22	W.	4					2										1					1				2	4	13
	C.	9				2	3	1									2	3	1			1	1			1	9	
23	W.	7				1	2										1	2				2			1	1	7	16
	C.	8	1			1	5	1								1	2		2			2				1	9	
24	W.	6				2	1										2		1							3	6	17
	C.	11				3	6	2	2							1	1	1		1		1	1		1	4	11	
25	W.	5	1			1											2	1	1							1	6	12
	C.	6				1	2										2		1							3	6	
26	W.	5				3								1								1	2			1	5	10
	C.	5					3										2	2								1	5	
27	W.	7	1			3	1										1	1				1	1		1	2	8	12
	C.	3		1			3										1	1	1								4	
28	W.	6				2											1					1				4	6	17
	C.	10		1		1	4						1				4		2						1	2	11	
29	W.	13				5										1		2				3	3		2	2	13	16
	C.	3					2											1				1	1				3	
30	W.	6			1	2	1					1							1			1	1			2	7	14
	C.	7				1	5	1									2		1			3				1	7	
31	W.	4	1			1	2											2					1			1	5	7
	C.	2					2																			2	2	
Totals.	W.	203	4	0	1	59	47	6	4	1	2	4	2	7	2	2	24	23	12	3	1	28	16	4	17	55	208	390
	C.	173	6	3	0	22	86	11	4	0	2	0	2	0	1	4	37	24	9	3	1	32	9	..	6	43	182	
Mean....	...	....	....	...	..	...	...	....	....		...		...	..			.	..			..	..	...	..	...	.	....	...

TABLE X CONTINUED.—DECEMBER, 1888.

Meteorological conditions.														
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity (miles).			
29.88	30.02	60	56	39.0	45.2	35.0	10.2	28	23	NW.	NW.	22	137	.....	1
30.09	30.02	72	69	35.0	45.0	28.9	16.1	26	26	0	0	6	21	.....	2
30.03	30.00	64	68	35.0	37.0	32.2	4.8	24	25	NW.	NW.	10	102	.....	3
29.84	29.82	80	69	34.0	44.7	29.8	14.9	27	26	0	0	20	87	.....	4
29.69	29.47	73	52	41.5	56.2	33.4	22.8	28	30	0	0	20	86	.....	5
29.83	30.10	62	53	36.0	41.3	33.7	7.6	28	19	NW.	NW.	27	261	*T.	6
30.16	30.01	78	56	34.5	48.2	27.2	21.0	22	26	0	S.	12	75	.....	7
30.05	29.95	81	59	39.0	55.8	32.5	23.3	29	30	0	SE.	4	33	.....	8
29.83	29.94	88	84	40.5	45.6	38.6	7.0	36	37	NE.	N.	10	76	.06	9
30.00	29.79	76	77	41.0	42.8	37.0	5.8	33	35	E.	NE.	12	129	.....	10
29.57	29.65	79	55	39.5	48.3	37.9	10.4	33	25	N.	NW.	24	292	.16	11
29.86	29.90	47	49	35.0	39.2	33.6	5.6	18	16	NW.	NW.	20	188	.....	12
29.86	30.00	63	50	28.0	36.0	26.0	10.0	19	11	NW.	NW.	24	166	.....	13
30.12	30.30	62	60	25.5	33.3	23.2	10.1	13	15	NW.	NW.	24	244	.....	14
30.46	30.34	80	70	27.0	38.6	19.5	19.1	17	24	N.	S.	13	108	.....	15
30.20	29.87	80	73	40.0	50.0	30.2	19.8	27	40	S.	SE.	13	103	.....	16
29.50	28.85	100	93	51.0	55.2	46.9	8.3	54	46	N.	NW.	36	250	2.43	17
29.36	29.64	58	61	37.0	42.8	34.6	8.2	26	23	NW.	NW.	24	335	.30	18
29.82	30.10	53	58	30.6	34.3	28.4	5.9	15	17	NW.	NW.	20	216	.....	19
30.26	30.14	73	48	26.0	34.2	21.5	12.7	15	13	N.	SW.	9	86	.....	20
29.89	30.00	81	47	26.5	38.7	20.5	18.2	19	11	S.	NW.	24	179	.....	21
30.38	30.48	53	49	22.0	32.7	16.2	16.5	3	10	N.	NW.	21	163	.....	22
30.48	30.35	79	37	28.0	42.0	19.6	22.4	16	11	N.	SE.	10	73	.....	23
30.31	30.24	88	64	30.5	48.0	22.8	25.2	22	25	0		5	34	.....	24
30.20	30.17	79	70	37.0	55.2	27.6	27.6	24	35	0	0	8	39	.....	25
30.12	29.94	91	87	43.0	60.0	32.7	27.3	32	47	0	SE.	8	72	.....	26
29.62	29.81	100	67	45.0	60.6	38.2	22.4	51	29	S.	NW.	30	236	.24	27
30.05	30.19	47	72	35.5	42.6	33.8	8.8	18	27	NW.	SE.	18	165	.....	28
30.36	30.42	88	57	32.0	48.2	83.6	24.6	23	24	W.	0	6	38	.....	29
30.51	30.35	89	54	34.5	49.8	24.9	24.9	24	26	N.	S.	8	52	.....	30
30.12	29.95	68	92	43.0	47.6	36.0	11.6	31	43	SE.	0	4	60	.08	31
930.45	929.81	22.92	19.56	1,091.5	1,399.1	926.0	473.1	781	795	.....	.....	.....	4,106	3.27	
30.015	29.994	73.9	63.1	35.2	45.1	29.9	15.3	25.2	25.6	NW.	NW.	.....	132.5	.105	

* Trace of rain.

TABLE X CONTINUED.—JANUARY, 1889.

Day of month.	Color.	Total deaths, less those by violence.	Deaths by violence: Accidents and negligence.	Deaths by violence: Suicides.	Deaths by ages: 60 years and over, less those by violence.	Deaths by ages: Under 5 years, less those by violence.	Deaths by ages: Under 8 days, less those by violence.	Deaths by ages: One day old and under, less those by violence.	Scarlet fever.	Croup.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of the lungs.	Pleurisy.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
1	W.	4			1	2							1		1							1			1	4	13
	C.	9				4										2	3					1			3	9	
2	W.	5			3								1			2	1								1	5	10
	C.	5			2	2	2	1								1	1							1	2	5	
3	W.	14			4	4	2	2								2		2		1	1	2		2	4	14	22
	C.	7	1		1	5	1	1							1	1	1	1	1		1				1	8	
4	W.	8	1		1	2				1			2			1					1		1		2	9	16
	C.	7			1	2							2				1				1				3	7	
5	W.	14			4	5	2	2					1	1		2	1			1	3				5	14	22
	C.	8			2	5	1			1							1				1				5	8	
6	W.	3	1			2				1								1			1					4	11
	C.	7			1	2							1			1	1				1	1			2	7	
7	W.	6		1	1	3											1		1		1			2	1	7	14
	C.	7			1	4	1									1			1		3				2	7	
8	W.	5			2										1	1	1							1	1	5	10
	C.	5			3	1											1					1		2	1	5	
9	W.	7			2	3					1						1							1	4	7	10
	C.	3				2										1	1								1	3	
10	W.	7			2	3	2	2					1								3			1	2	7	12
	C.	5				3	1	1								2		2			1					5	
11	W.	10			6	1										1			1		4	1			3	10	17
	C.	7			2	4										2	1		1		1				2	7	
12	W.	8	1		4	3							1			3	1								3	9	14
	C.	5			1	2										1					1	1			2	5	
13	W.	6				2				1						1	1					1			2	6	16
	C.	10			2	6	2	1					1			1	1		1		1				5	10	
14	W.	8			2	4	2	2																	8	8	11
	C.	3			1	2											1								2	3	
15	W.	8			2	2										2					3			1	2	8	15
	C.	7				2										3		1				1			2	7	
16	W.	5				3					1					2			1						1	5	10
	C.	5			1	3				1											1				3	5	
17	W.	7				4										1	3	1			1				1	7	14
	C	7				4	1									2	2	2							1	7	
18	W.	8				2	1												1		2	1		1	3	8	14
	C.	6			1	2											1	1			1				3	6	
19	W.	7			4	2									1						1				5	7	15
	C.	7	1		2	4										1	3					1			2	8	
20	W.	8	1		2	2			1							1		1			2	1		1	1	9	15
	C.	6				4	1	1																2	4	6	
21	W.	4												1	1	1									1	4	15
	C.	11				9	1	1								2	2	2			1				4	11	
22	W.	8		1	5	1										2	1				2			1	2	9	16
	C.	7			2	1	1									3					2				2	7	
23	W.	4			2	1				1								1			2					4	15
	C.	11				8				1	1		1			2	1	1			2			1	1	11	
24	W.	13			2	2				1						1	1				5	1		1	3	13	21
	C.	8			1	6	2	2								2	1								5	8	
25	W.	1																				1				1	8
	C.	7				3										2								1	4	7	
26	W.	8			1	2					1						1	1			2				3	8	11
	C.	3				1										1									2	3	
27	W.	7			2	3			1	1					1							1			3	7	17
	C.	10			1	3										2	1	1			2	2			2	10	
28	W.	10			3	3	1					1	1								4				4	10	15
	C.	5			2	2	1									1		1						1	2	5	
29	W.	3				1	1										1								2	3	12
	C.	8		1	2	4										1		2			2		1	1	1	9	
30	W.	5			2	2			1			1					1				1				1	5	8
	C.	2	1										1				1									3	
31	W.	5				3	2	2								1	1								3	5	11
	C.	6			1	3										1	2				1				2	6	
Totals	W.	216	4	2	57	66	13	10	3	6	3	2	8	2	5	24	16	7	4	2	39	10	1	12	72	222	430
	C.	204	3	1	30	103	15	8	0	3	1	0	6	0	1	36	27	14	4	0	23	8	1	9	71	208	
Means																											

TABLE X CONTINUED.—JANUARY, 1889.

Meteorological conditions.															
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles.			
30.00	29.90	66	66	38.0	48	36	12	28	27	NW.	NW.	14	126	.....	1
29.88	29.96	90	62	34.0	48	27	21	27	36	SW.	N.	9	73	.....	2
30.10	30.08	90	72	35.0	50	28	22	27	31	NE.	SE.	8	53	.....	3
30.11	30.03	80	67	38.5	51	29	22	27	34	SE.	E.	4	41	.....	4
29.80	29.53	96	89	45.0	47	40	7	44	42	NE.	NE.	24	301	1.26	5
29.54	29.64	96	67	44.0	50	41	9	41	35	N.	NW.	20	258	.26	6
29.68	29.78	61	67	40.5	46	39	7	29	29	NW.	NW.	24	217	.....	7
29.87	29.83	81	74	37.0	50	33	17	29	32	NW.	SE.	6	64	.....	8
29.52	29.37	92	48	45.0	60	39	21	42	27	NW.	W.	24	163	.46	9
29.78	30.00	57	51	36.0	49	31	18	19	22	SW.	NW.	13	149	.....	10
30.15	30.10	70	69	34.0	44	30	14	23	26	W.	S.	8	54	.....	11
30.21	30.25	90	68	35.0	49	29	20	27	30	NW.	E.	8	54	.....	12
30.26	30.18	90	82	33.5	45	28	17	28	32	NE.	S.	4	42	.....	13
30.20	30.28	90	70	34.0	47	28	19	27	29	0	NE.	11	90	.....	14
30.40	30.30	73	72	32.0	40	29	11	22	26	NE.	SE	8	82	.....	15
30.18	29.89	82	100	40.0	*45	33	12	31	44	SE.	NW.	6	62	.13	16
29.60	29.66	94	80	53.5	66	41	25	55	44	S.	NW.	24	128	.34	17
29.83	29.98	63	48	41.5	53	38	15	28	25	N.	N.	20	144	.....	18
30.31	30.41	49	68	30.5	39	30	9	14	21	N.	NW.	14	153	.....	19
30.36	29.75	87	100	29.0	35	23	12	21	34	NE.	N.	11	135	†.46 .46	20
29.59	29.98	90	53	30.5	38	27	11	28	15	NW.	NW.	30	271	.....	21
30.34	30.44	59	56	29.0	38	24	14	13	18	NW	0	10	94	.....	22
30.46	30.41	76	63	31.0	47	24	23	18	25	N.	SE.	6	48	....	23
30.30	30.13	84	77	37.0	48	29	19	26	36	NE.	N.	4	35	§T.	24
30.07	30.07	92	64	42.5	53	38	15	38	33	N.	NW.	6	78	.22	25
29.99	29.80	84	93	43.0	48	36	12	35	44	NW.	SE.	4	41	.04	26
29.43	29.08	100	96	42.5	47	38	9	39	44	NW.	S.	14	122	.37	27
29.32	29.38	62	49	36.0	42	34	8	26	17	NW.	NW.	15	183	.....	28
29.60	29.90	50	56	28.0	34	27	7	11	15	NW.	NW.	26	283	.....	29
30.11	30.06	65	62	29.5	38	23	15	16	22	SW.	S.	12	96	.....	30
29.92	29.70	69	92	35.5	50	30	20	22	38	S.	NW.	20	171	‡.05	31
928.91	927.87	2,428	2,181	1,140.5	1,445	982	463	861	923	.....	.....	....	3,811	4.05	
29.965	29.921	78.3	70.4	36.8	46.6	31.7	14.9	27.8	29.8	NW.	NW.	....	122.9	.131	

*Temperature rose after midnight. †Snow and rain. ‡Rain and hail. §Trace of rain.

TABLE X CONTINUED.—FEBRUARY, 1889.

Day of month.	Color.	Mortality.																								
			Deaths by violence.		Deaths by ages.																					
		Total deaths, less those by violence.	Accidents and negligence.	Homicides.	60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days, less those by violence.	One day old and under, less those by violence.	Scarlet fever.	Croup.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Pleurisy.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths, by color.	Total deaths.
1	W.	9			3	1										4	2	1				1			1	9	14
	C.	5			1	4										1		2						1	1	5	
2	W.	6				1						1				1					2			1	1	6	15
	C.	8	1			5										2	1		1		2				2	9	
3	W.	6			1	2	1									1					1				4	6	13
	C.	6	1			4	1									2		1			1			1	1	7	
4	W.	6			3	1				1						1					1			2	1	6	12
	C.	6			2	2						1				4									1	6	
5	W.	5			1	1					1					1		1							2	5	8
	C.	3				2										1								1	1	3	
6	W.	3				2											1							1	1	3	6
	C.	2	1			1										1									1	3	
7	W.	10			1	3	1	1							1	1	3		1			1			3	10	14
	C.	4														1	2								1	4	
8	W.	12		1	2											2	1				1	3	1	1	3	13	17
	C.	2	2		1	1	1														1				1	4	
9	W.	4			1	1										1	1						1		1	4	9
	C.	4	1			1										1	1					1			1	5	
10	W.	15			4	1										1	3	1			2	2	1	1	4	15	21
	C.	6			1	4											2	1							3	6	
11	W.	8			2	1					1						2	1			2			1	1	8	16
	C.	8			2	4				1							1	1				2	1	1	1	8	
12	W.	7			3								2								1			1	3	7	13
	C.	6			1	2									1	1		1			1				2	6	
13	W.	6	1			1										1			1		1			2	1	7	16
	C.	9			2	2										2	2	1		1	1				2	9	
14	W.	4	1		3							1					1				1				1	5	16
	C.	11				5								1		4	2				2			1	1	11	
15	W.	8			1	3	1	1	1	2						1	2							1	1	8	15
	C.	6	1		1	2	1	1				1					1				2		1		1	7	
16	W.	11			1	5										2	3				2				4	11	22
	C.	10	1		1	3				1						1	2	1			1	1	1		2	11	
17	W.	2											1			1										2	8
	C.	6				5						1			1	1	1	1							1	6	
18	W.	10			3	4				1							1	1				2			5	10	20
	C.	9	1			5	1	1					1				1	1				1		1	4	10	
19	W.	7			1	2							1			1			1		1			1	2	7	9
	C.	2			1	1											1								1	2	
20	W.	8			3	3						1					1				4			1	1	8	14
	C.	6				2											2	1	1						2	6	
21	W.	9			3	2			1							2	1		1		1	1			2	9	13
	C.	4			1	2										2		1			1					4	
22	W.	9			1						1		1			1					1	1		1	3	9	18
	C.	9			1	3	1									1	3				1	1		1	2	9	
23	W.	5			2						1					2	1				1					5	9
	C.	4			2	1										2	2									4	
24	W.	7			4											3					1	1		1	1	7	14
	C.	7				4	1	1		1						2					1				3	7	
25	W.	4			1	2					1						1							1	1	4	9
	C.	5			1	3									1	1		2							1	5	
26	W.	9			5	1					1										2	3		2	1	9	17
	C.	8			2	4	2	1								1	1				1	1	1		3	8	
27	W.	5		1	1	1					1						1					1		1	1	6	10
	C.	4				1										2					1				1	4	
28	W.	7			1								1	1		1	2				1				1	7	15
	C.	8			1	3											2			1	1	1		1	2	8	
Totals	W.	202	2	2	51	38	3	2	2	4	7	3	6	1	1	28	27	5	4	0	26	16	3	19	50	206	383
	C.	168	9	0	21	76	8	4	0	3	0	3	1	1	3	33	27	14	2	2	17	8	4	8	42	177	
Means																											

TABLE X CONTINUED.—FEBRUARY, 1889.

Meteorological conditions.														
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.				
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles.	Total movement of wind.	Daily rain-fall.	Day of month.
30.01	30.08	68	59	35.5	35	28	7	21	19	NW.	NW.	30	243	.04	1
29.88	29.77	82	50	32.0	49	23	26	20	21	SW.	NW.	11	97	.....	2
29.70	29.72	79	58	35.0	48	28	20	25	26	S.	NE.	12	101	.....	3
29.84	29.72	95	71	31.5	40	30	10	28	25	NE.	E.	9	117	*T.	4
29.48	29.45	86	81	35.0	54	31	23	32	29	0.	NW.	27	134	.16	5
29.72	29.88	58	58	20.0	26	19	7	7	7	NW.	NW.	26	309	.....	6
30.05	30.13	55	56	21.0	29	16	13	4	10	W.	NW.	24	220	....	7
30.10	29.85	60	41	31.0	44	19	25	10	18	E.	S.	12	123	.....	8
29.91	30.04	63	44	34.0	46	33	13	23	14	S.	NW.	15	150	....	9
30.13	29.99	62	48	33.5	42	26	16	21	16	W.	SE.	8	93	.....	10
29.78	29.68	100	85	31.0	35	28	7	29	29	S.	S.	6	86	.10	11
29.79	29.70	62	61	28.0	34	26	8	17	16	W.	NW.	20	164	.....	12
29.80	29.75	56	54	23.0	31	18	13	6	13	NW.	N.	20	179	.....	13
29.92	30.11	69	46	28.0	35	23	12	15	12	W.	N.	16	144	*T.	14
30.22	30.23	58	49	32.0	36	24	12	17	16	NE.	SW.	6	49	*T.	15
30.15	29.84	90	95	32.5	35	30	5	28	32	NE.	NW.	7	106	.83	16
29.77	29.74	100	88	37.0	45	31	14	32	39	S.	NE.	7	58	.....	17
29.45	29.52	96	62	40.5	44	37	7	37	31	NE.	NW.	20	155	.60	18
29.96	30.17	52	40	30.0	33	28	5	13	9	NW.	NW.	20	240	.....	19
30.43	30.50	62	34	28.5	40	23	17	13	7	NW.	NW.	16	158	.....	20
30.63	30.47	88	58	30.0	37	23	14	23	20	NW.	S.	8	69	.....	21
30.28	30.08	94	90	32.5	37	29	8	28	31	SE.	S.	6	63	.17	22
30.32	30.57	59	46	17.0	33	13	20	9	−4	NW.	N.	22	310	.....	23
30.75	30.55	88	67	9.5	19	4	15	1	6	N.	S.	12	124	*T.	24
30.54	30.62	92	61	22.0	32	14	18	14	16	N.	NE.	12	119	.01	25
30.69	30.58	90	75	28.0	34	23	11	21	25	E.	E.	7	106	.....	26
30.45	30.34	85	91	34.0	27	30	7	29	32	E.	N.	6	55	.56	27
30.39	30.44	82	78	36.5	39	34	5	31	30	N.	NE.	9	113	*T.	28
842.14	841.52	2,131	1,746	823.5	1,049	691	358	554	545	.....	.....	....	3,885	2.47	
30.076	30.054	76.1	62.4	29.4	37.5	24.7	12.8	19.8	19.5	NW.	NW.	....	138.8	.....	

*Trace of rain.

TABLE X CONTINUED.—MARCH, 1889.

Day of month.	Color.	Mortality.																												
		Total deaths, less those by violence.	Deaths by violence.			Deaths by ages.				Scarlet fever.	Croup.	Diphtheria.	Diarrheal diseases.	Typhoid fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
			Accidents and negligence.	Homicides.	Suicides.	60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days old, less those by violence.	One day old and under, less those by violence.																	
1	W.	10	1	...	...	3	3	...	...	1	...	...	...	1	2	2	...	...	2	1	...	...	1	11		
	C.	6	...	...	...	...	1	...	...	...	...	...	...	1	1	1	...	...	2	...	...	...	...	6		17
2	W.	3	...	...	...	1	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	3		
	C.	8	...	...	...	2	2	1	...	...	...	...	...	...	...	1	...	...	1	...	...	1	2	8		11
3	W.	3	...	...	1	1	1	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	4		
	C.	5	...	...	...	1	2	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	3	5		9
4	W.	7	1	...	...	2	2	1	1	...	...	...	...	1	...	...	...	...	2	1	...	...	3	8		
	C.	7	...	...	...	1	4	...	...	...	...	...	...	...	...	1	3	...	1	...	...	...	2	7		15
5	W.	10	...	...	...	7	3	1	...	...	...	...	...	...	...	...	3	2	3	1	...	1	...	10		
	C.	4	...	...	...	...	3	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	2	4		14
6	W.	11	2	...	1	2	1	...	...	...	...	...	...	...	...	3	1	...	1	...	...	2	4	14		
	C.	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2		16
7	W.	4	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	1	4		
	C.	5	...	...	...	2	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	3	5		9
8	W.	14	...	...	...	3	6	1	...	...	1	...	...	1	1	1	1	...	3	1	...	2	3	14		
	C.	5	...	...	...	...	4	1	1	...	...	...	...	...	...	...	1	1	2	...	...	1	...	5		19
9	W.	11	...	...	...	1	3	1	1	...	...	...	...	...	...	2	1	1	1	1	1	...	4	11		
	C.	8	...	...	...	2	4	1	...	...	...	...	...	...	...	2	...	...	2	1	...	...	3	8		19
10	W.	7	...	...	...	2	3	1	...	...	...	...	...	...	...	...	...	...	3	...	...	1	3	7		
	C.	8	...	...	...	1	2	...	...	...	...	...	...	...	...	2	...	...	2	1	...	...	3	8		15
11	W.	10	1	...	1	2	3	...	...	...	...	...	1	...	...	2	2	...	...	...	1	1	3	12		
	C.	5	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	3	5		17
12	W.	14	...	...	...	3	3	...	...	...	...	...	1	...	...	...	2	...	2	1	...	2	5	14		
	C.	8	...	...	...	2	4	1	1	...	...	...	...	...	...	2	1	1	1	...	...	...	...	8		22
13	W.	10	...	...	...	2	3	2	2	...	...	...	...	...	...	2	1	1	2	1	...	1	2	10		
	C.	13	...	...	...	2	4	...	...	...	...	...	...	...	...	2	...	...	...	2	1	...	8	13		23
14	W.	6	...	...	...	3	...	...	...	...	...	...	...	...	...	...	2	...	1	1	...	...	2	6		
	C.	7	1	1	...	...	2	...	...	...	...	...	...	...	...	2	1	...	...	...	...	1	3	9		15
15	W.	10	...	...	...	3	5	...	...	...	1	1	1	...	...	1	5	...	...	...	...	...	1	10		
	C.	4	...	...	...	3	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	3	4		14
16	W.	12	...	...	...	7	...	...	...	...	...	...	...	...	...	3	1	1	2	...	...	3	1	12		
	C.	11	...	...	...	...	4	...	...	...	...	...	...	...	...	6	2	...	1	...	...	1	...	11		23
17	W.	12	...	...	...	3	2	...	...	...	...	...	...	...	...	2	1	1	1	2	...	...	4	12		
	C.	5	...	...	...	...	2	...	...	...	...	...	...	...	...	3	1	...	...	...	...	...	1	5		17
18	W.	9	...	...	...	3	3	...	...	...	...	...	...	...	...	1	...	...	...	1	...	3	4	9		
	C.	7	1	...	...	1	4	...	...	...	...	...	...	...	...	...	1	...	1	2	...	...	2	8		17
19	W.	9	...	...	...	5	...	...	...	...	...	...	...	...	...	1	1	1	2	2	...	...	1	9		
	C.	4	1	...	...	...	1	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	1	5		14
20	W.	6	...	...	...	0	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	2	2	6		
	C.	8	...	...	...	...	5	...	...	...	...	1	...	...	...	1	1	1	1	1	...	...	1	8		14
21	W.	5	...	...	...	1	2	...	...	...	...	...	...	...	...	...	1	...	1	2	...	...	1	5		
	C.	7	...	...	...	...	2	1	...	...	...	...	...	...	...	2	2	...	1	...	...	...	2	7		12
22	W.	5	...	...	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	5		
	C.	5	...	...	...	1	4	2	1	...	...	...	...	...	...	1	...	1	...	...	...	...	3	5		10
23	W.	7	1	...	...	1	4	1	...	...	...	...	...	...	...	...	1	1	2	...	...	1	2	8		
	C.	3	...	...	...	...	3	2	2	...	...	...	...	...	...	...	...	...	1	...	...	...	2	3		11
24	W.	11	...	...	...	2	3	...	...	...	...	...	...	...	...	...	2	...	...	1	1	1	6	11		
	C.	8	...	...	...	...	4	2	2	...	...	...	...	...	...	1	...	1	1	2	...	...	3	8		19
25	W.	7	...	...	...	1	1	1	...	...	...	...	...	1	2	...	...	...	...	...	...	...	4	7		
	C.	3	...	...	...	...	3	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	3		10
26	W.	7	1	...	...	1	2	...	...	...	1	...	...	...	...	2	...	...	3	...	...	...	1	8		
	C.	8	...	...	...	1	5	...	...	...	...	...	...	...	...	2	3	...	1	...	...	...	2	8		16
27	W.	5	...	...	...	1	2	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	2	5		
	C.	14	...	...	...	1	7	1	...	...	1	...	...	...	5	2	...	...	2	...	...	1	3	14		19
28	W.	3	...	...	...	2	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	3		
	C.	6	1	...	...	1	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	4	7		10
29	W.	5	...	...	...	0	...	...	...	...	...	...	...	...	1	2	...	...	1	...	...	...	1	5		
	C.	2	...	...	...	...	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2		7
30	W.	8	...	...	...	3	3	...	...	...	...	...	...	1	...	1	1	2	1	...	...	...	1	8		
	C.	8	...	...	...	1	4	1	...	...	...	...	...	1	...	1	2	...	...	1	...	1	2	8		16
31	W.	9	...	...	...	...	2	1	...	...	...	1	...	1	...	2	...	...	...	1	...	1	3	9		
	C.	11	...	...	...	3	3	...	...	...	...	...	...	...	...	2	1	1	2	...	...	...	5	11		20
Totals	W.	250	7	0	3	69	65	10	4	2	5	2	4	6	2	29	32	11	5	36	20	4	22	70	260	
	C.	205	4	1	0	26	89	17	10	0	2	0	1	3	2	43	28	8	5	21	12	1	7	72	210	470
Means																										

TABLE X CONTINUED.—MARCH, 1889.

Meteorological conditions.															
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles.			
30.42	30.28	90	71	36.0	44	30	14	30	30	E.	SW.	4	40	.....	1
30.17	30.04	78	84	39.5	45	34	11	30	38	E.	SE.	5	57	.04	2
29.90	29.78	96	96	41.0	42	38	4	38	41	NE.	N.	10	120	.91	3
29.52	29.49	85	100	40.0	44	34	10	35	40	NE.	N.	28	271	.86	4
29.50	29.52	81	66	40.0	48	38	10	38	28	NW.	NW.	22	336	.09	5
29.47	29.37	55	51	39.5	50	34	16	22	26	NW.	NW.	24	312	.....	5
29.35	29.40	58	52	39.5	45	34	11	26	24	SW.	W.	20	205	.....	7
29.52	29.64	65	43	38.0	47	30	17	26	18	SW.	SW.	25	178	.....	8
29.72	29.78	67	55	35.5	39	30	9	24	21	NW.	NW.	30	306	.01	9
29.82	29.87	80	72	33.5	39	31	8	27	27	NW.	NW.	20	290	†T	10
30.00	29.98	53	40	37.0	48	31	17	16	19	NW.	NW.	20	225	.....	11
30.02	29.92	74	44	43.0	58	30	28	29	29	SW.	SE.	9	60	.....	12
30.00	29.92	82	53	45.5	67	33	34	32	35	NW.	SE.	15	82	.....	13
30.03	30.03	55	43	47.0	55	39	16	34	23	NE.	NE.	16	172	.....	14
29.92	29.81	50	48	40.5	48	37	11	21	35	NE.	NE.	20	290	†T	15
29.78	29.72	66	52	44.0	54	37	17	28	33	NE.	N.	18	196	.02	16
29.75	29.78	72	67	47.5	65	44	21	37	38	N.	E.	10	91	.....	17
29.80	29.71	96	74	44.5	61	35	26	37	43	NW.	SE.	10	85	.02	18
29.65	29.58	96	92	41.5	44	40	4	40	40	NE.	NE.	18	192	1.45	19
29.61	29.70	88	68	40.5	44	38	6	36	32	NE.	N.	24	269	.11	20
29.76	29.88	100	96	36.5	39	33	6	34	38	NW.	NW.	12	170	*.40	21
30.06	30.11	83	54	43.5	54	35	19	33	33	N.	N.	16	159	.17	22
30.10	29.96	73	57	47.0	58	37	21	33	37	NW.	W.	16	202	.....	23
29.89	29.62	83	60	49.5	66	36	30	38	42	W.	S.	12	119	....	24
29.47	29.60	93	69	51.0	60	48	12	48	42	S.	E.	15	104	.01	25
29.96	29.91	57	56	38.5	52	30	22	19	29	NE.	SE.	12	136	.....	26
29.87	29.73	81	62	51.5	70	38	32	38	46	S.	NW.	24	196	T	27
29.70	29.90	59	46	45.5	50	36	14	33	25	N.	NW.	26	226	.04	28
30.03	29.82	55	47	48.0	58	36	22	28	33	SW.	SW.	24	336	.....	29
30.26	30.28	43	50	34.0	44	29	15	10	21	NW.	SE.	29	294	.....	30
30.12	29.72	83	59	52.0	66	34	32	33	51	S.	SW.	26	322	.07	31
925.17	923.85	2,300	1,927	1,310.5	1,604	1,089	515	953	1,009	.....	.....	....	5,941	4.20	
29.844	29.802	74.2	62.2	42.3	51.7	35.1	16.6	30.7	32.5	NW.	NW.	...	191.6	.135	

* Moist snow 6.30 to 10.30 a. m.—Melted as it fell.

† Trace of rain.

TABLE X CONTINUED.—APRIL, 1889.

Day of month.	Color.	Mortality. Total deaths, less those by violence.	Deaths by violence. Accidents and negligence.	Deaths by violence. Homicides.	Deaths by violence. Suicides.	Deaths by ages. 60 years and over, less those by violence.	Deaths by ages. Under 5 years, less those by violence.	Deaths by ages. Under 8 days old, less those by violence.	Deaths by ages. One day old and under, less those by violence.	Scarlet fever.	Croup.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
1	W.	10				3	3					1					1				2	2	1	1	2	10	19
	C.	9				2	4	1			2					2		1	1						3	9	
2	W.	14				5	4	1	1				1				2	1			3	1		1	5	14	22
	C.	8				1	3				1			1			1	1			2				2	8	
3	W.	8				2						1					3				1				3	8	13
	C.	4	1				3				1										1				2	5	
4	W.	10				3	4	1										3			2			1	4	10	18
	C.	8				3	1										1	1	1		1	1			3	8	
5	W.	10				7	1									1		1			2	1		2	3	10	15
	C.	4	1				3						1					2	1							5	
6	W.	11				2	5	2	1									2	1		3	2			3	11	17
	C.	6				1	2											1			1			1	3	6	
7	W.	4				1	2													1		1		1	1	4	13
	C.	9				2	6										1	1	1			1			5	9	
8	W.	6				4	1											2	1		1	1			1	6	15
	C.	9					5							1				1	2		2			2	1	9	
9	W.	9				2	3				1						1		1		1			2	3	9	13
	C.	4				1	2	1	1								1				1				2	4	
10	W.	5	1			1	2	2	1									1			1			1	2	6	17
	C.	11				3	6	1						1			1	2	1		3	1			2	11	
11	W.	7				3											4				2			1		7	9
	C.	2				1											2									2	
12	W.	13				4	5									1	2	2			4		1	2	1	13	15
	C.	2																1				1				2	
13	W.	7				3	2	1									1				2	1			3	7	14
	C.	7				1	2													1	1	3			2	7	
14	W.	8				2								1			2	2						1	2	8	16
	C.	8				1	2								1		2	1			1			1	2	8	
15	W.	8				2	1											1			5			1	1	8	17
	C.	9				3	3										2							2	5	9	
16	W.	8				3	2					1					3					1			3	8	12
	C.	4					2										1					1			2	4	
17	W.	3	1			1											1	1	1							4	6
	C.	2															1				1					2	
18	W.	6					3			1		1	1					1		1					1	6	18
	C.	12				3	5										3				3			2	4	12	
19	W.	6			1	2	2					2					1							2	1	7	10
	C.	3					1										1			1					1	3	
20	W.	6				2	2									1	1				1			1	2	6	10
	C.	4					3	1	1												1				3	4	
21	W.	3	1			1	1										3									4	13
	C.	9				1	4										2		1			1		2	3	9	
22	W.	5				1	3	1	1	1											2				2	5	9
	C.	4				1	1											2							2	4	
23	W.	3				1											1				1				1	3	9
	C.	5		1		3	1										1	1	2			1				6	
24	W.	5															1					1			3	5	15
	C.	10				2	5	2		2			1				1				2				4	10	
25	W.	8				4	1			1				1			1				1			2	2	8	19
	C.	11				2	4										3	2			2			1	3	11	
26	W.	8				1	1				1	1					3	1			1				1	8	13
	C.	5				1	1										1				1				3	5	
27	W.	4				2	1	1	1												1	2			1	4	7
	C.	3					3												1		1				1	3	
28	W.	6				1	2			1		1					2				1				1	6	8
	C.	2					1																		2	2	
29	W.	4				4											1							1	2	4	9
	C.	5				1	2										1				1			1	2	5	
30	W.	4				1	1														1	2		1		4	11
	C.	7				1	2										3	1			1				2	7	
Totals	W.	209	3	..	1	68	52	9	5	4	2	8	2	2	..	3	34	18	4	2	38	15	2	21	54	213	402
	C.	186	2	1	...	34	77	6	2	2	4	..	2	3	1	2	29	18	11	2	26	10	..	12	64	189	
Means																											

TABLE X CONTINUED.—APRIL, 1889.

Meteorological conditions.														
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles.			
29.72	29.59	74	97	58.5	66	53	13	55	53	SW.	SW.	20	216	.32	1
29.68	29.78	86	54	52.0	63	45	18	45	39	NW.	NE.	30	171	.02	2
29.75	29.57	80	41	58.5	82	45	37	44	43	S.	NW.	32	264	.01	3
29.88	29.94	59	51	46.5	54	45	9	33	29	NW.	NW.	28	290	.....	4
29.96	29.87	75	59	43.0	52	35	17	32	33	N.	S.	9	93	.....	5
29.84	30.07	92	50	40.5	42	32	10	37	24	E.	NE.	48	401	*2.23	6
30.18	30.20	68	57	43.0	55	38	17	31	30	N.	NE.	32	355	.01	7
30.09	29.95	55	30	49.5	61	38	23	28	25	N.	NE.	30	337	.....	8
29.92	29.81	46	46	54.0	64	41	23	30	38	N.	W.	15	248	.....	9
29.87	29.87	61	52	55.0	67	47	20	40	38	NW.	N.	20	342	.....	10
29.94	29.77	70	63	57.0	76	39	37	39	52	N.	N.	20	136	†T.	11
29.61	29.46	78	79	61.0	73	54	19	51	57	SW.	SW.	24	101	.04	12
29.55	29.78	85	87	53.0	56	47	9	52	46	N.	N.	18	147	.26	13
30.08	30.06	57	47	46.0	57	36	21	26	31	NE.	E.	15	153	.....	14
30.12	30.14	79	48	47.5	57	42	15	40	30	NE.	NE.	24	275	.....	15
30.12	30.01	58	62	47.0	51	41	10	28	38	NE.	NE.	22	348	.12	16
29.91	28.85	100	94	49.0	55	43	12	44	52	N.	NE.	14	233	.21	17
29.94	29.96	94	82	54.5	62	51	11	51	51	NE.	NE.	7	87	.02	18
30.04	29.95	91	76	57.5	74	43	31	50	54	E.	SE.	13	133	.....	19
29.97	29.94	100	87	58.5	83	49	34	53	60	NE.	NW.	15	100	.20	20
29.91	29.96	80	31	68.0	79	59	20	58	40	NW.	NW.	60	257	.32	21
30.20	30.19	40	39	53.0	64	43	21	27	31	NW.	N.	18	205	.....	22
30.33	30.20	61	60	51.0	67	39	28	33	42	E.	S.	15	214	.....	23
30.18	29.95	79	71	58.0	73	48	25	47	52	S.	S.	24	282	.....	24
29.84	29.71	86	97	57.0	58	55	3	54	55	NW.	N.	15	173	1.50	25
29.49	29.22	97	94	55.5	60	52	8	52	56	N.	NE.	36	458	3.21	26
29.17	29.24	91	70	55.5	58	53	5	55	44	NW.	W.	30	373	.58	27
29.35	29.50	66	53	57.0	66	51	15	45	41	SW.	NW.	18	203	.01	28
29.59	29.70	61	59	56.0	66	51	15	44	41	W.	NW.	24	212	.02	29
29.82	29.78	62	88	54.0	64	43	21	39	53	NW.	W.	20	125	.05	30
896.05	895.02	2,331	1,924	1,596.5	1,905	1,358	547	1,263	1,278	.....	.....	...	6,832	9.13	
29.868	29.834	77.7	64.1	53.2	63.5	45.3	18.2	42.1	42.6	N. and W.	NE.	....	227.7	.304	

* Rain, snow, and thunder storm.

†Trace of rain.

TABLE X CONTINUED.—MAY, 1889.

Day of month.	Color.	Mortality: Total deaths, less those by violence.	Deaths by violence: Accidents and negligence.	Deaths by violence: Judicial execution.	Deaths by violence: Homicides.	Deaths by violence: Suicides.	Deaths by ages: 60 years and over, less those by violence.	Deaths by ages: Under 5 years, less those by violence.	Deaths by ages: Under 8 days old, less those by violence.	Deaths by ages: One day and under, less those by violence.	Scarlet fever.	Croup.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
1	W.	11					4					1			1			2				1	1	1	1	3	11	18
	C.	7						2										3	1		1	1				1	7	
2	W.	2					1											1								1	2	5
	C.	3						1														1				2	3	
3	W.	4	1				2											1				2				1	5	9
	C.	4						1										1	1		1					1	4	
4	W.	6					2	1										1				1	1			3	6	13
	C.	6	1				1	1										1				1	1			3	7	
5	W.	4					1											1				1		1		1	4	10
	C.	6					2	2			1							1				2	1		1		6	
6	W.	6					2	1										1				1			1	3	6	12
	C.	6					1	2	1	1									2			1				3	6	
7	W.	6					1	1									1	1	1							3	6	13
	C.	7					1	2									1	1				2			1	2	7	
8	W.	5					2	1	1													2	2			1	5	8
	C.	3																3									3	
9	W.	15					1	1									1	2	1		1	2	1	1	1	5	15	19
	C.	4					1	1	1									1				2				1	4	
10	W.	6					3	2											1			4				1	6	14
	C.	7	1				1	3	1				1					3				1	1			1	8	
11	W.	8					1	5	2	2			1					2				1				4	8	13
	C.	5						3										2		1		1				1	5	
12	W.	4					1	1	1									1				1				2	4	8
	C.	4						3	1					1					1			2					4	
13	W.	9	1				2	1	1	1			1					2				2				4	10	13
	C.	3					1	1						1												2	3	
14	W.	2						1														1				1	2	5
	C.	3						3										1				2					3	
15	W.	3																1				1				1	3	7
	C.	3	1					2							1											2	4	
16	W.	3	1																				1		1	1	4	7
	C.	3									1			1												1	3	
17	W.	10	1		1	1	2	4	1	1	1				1			1	1	1					1	4	13	22
	C.	7	1	1				2									1	1		1		3				1	9	
18	W.	3						2																		3	3	7
	C.	3				1		3											1			1			1		4	
19	W.	5					1	1			1							2			1					1	5	10
	C.	5					1	3									1	1				3					5	
20	W.	5					2											1					2		1	1	5	15
	C.	10					5	3	2									3				2	2		1	2	10	
21	W.	5					2	2										1				2			1	1	5	8
	C.	3						2										1	2								3	
22	W.	7					2	1			1											2	1	1		2	7	12
	C.	5						2						1				3								1	5	
23	W.	3						1										1					1			1	3	6
	C.	3						1										1			1					1	3	
24	W.	9					4											1				1	1			6	9	14
	C.	5						4	1													2			1	2	5	
25	W.	4					1	1														2	1			1	4	11
	C.	7					3	1										2				2			1	2	7	
26	W.	5					3	1							1							2			2		5	14
	C.	9					1	4	1									4				1	1		1	2	9	
27	W.	5					1	1	1	1					1			1				1				2	5	8
	C.	2			1		1																			2	3	
28	W.	5					1	2						1								1	2			1	5	8
	C.	3					1	2	1										1				1			1	3	
29	W.	5						3	1	1				1				1				1				2	5	12
	C.	7					2	1										1				2			2	2	7	
30	W.	5	1				2				1							1				3					6	16
	C.	9	1				3								1			2				1		1	1	3	10	
31	W.	5					1	2	1	1								1								4	5	9
	C	4					1	1	1	1								1	1			1	1				4	
Totals	W.	175	5	..	1	1	45	36	9	7	4	1	2	2	4	..	2	27	4	1	2	35	14	4	9	64	182	346
	C.	156	5	1	1	1	26	56	10	2	2	..	1	4	2	..	3	37	10	2	3	34	8	1	10	39	164	
Means		...	...	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	...	..	..	..	...	...

TABLE X CONTINUED.—MAY, 1889.

Meteorological conditions.														
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.	8 p. m.	8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles			
29.90	29.92	62	85	48.5	54	45	9	38	42	N.	NW.	12	102	.33	1
29.91	29.83	79	61	51.0	62	39	23	42	41	NW.	NW.	15	138	.02	2
29.86	29.90	69	61	49.0	54	44	10	38	37	NW.	W.	18	241	.....	3
29.98	29.96	58	47	54.5	64	43	21	35	39	NW.	NW.	20	242	.....	4
30.06	29.95	47	52	63.0	76	47	29	39	49	NW.	NW.	15	160	.....	5
30.02	29.89	45	58	67.5	82	54	28	45	53	NW.	N.	13	144	.....	6
29.94	29.86	69	49	64.0	82	48	34	52	46	N.	SE.	10	78	.....	7
29.89	29.87	69	61	67.5	89	49	40	52	59	SE.	NW.	8	67	.....	8
29.93	29.82	65	54	74.5	93	53	37	59	59	N.	.....	7	59	.....	9
29.80	29.73	57	72	73.5	92	62	30	61	61	S.	N.	55	196	.03	10
29.61	29.62	77	69	71.5	83	65	18	63	61	W.	N.	30	252	.10	11
29.71	29.68	74	66	71.0	82	62	20	59	62	W.	NE.	15	124	.02	12
29.78	29.63	81	74	71.0	79	62	17	62	65	NE.	S.	24	125	.10	13
29.66	29.71	92	89	63.5	79	59	20	62	60	SW.	SE.	28	125	.93	14
29.88	29.91	72	74	68.0	79	60	19	56	60	N.	E.	10	108	.07	15
29.98	30.00	71	68	70.5	82	55	27	57	63	E.	S.	10	116	.....	16
30.14	30.14	68	62	72.0	85	62	23	59	60	S.	S.	13	147	.....	17
30.23	30.12	82	70	69.5	82	60	22	59	63	S.	SE.	15	140	.....	18
30.10	29.97	85	90	67.0	73	64	9	63	63	SE.	E.	12	110	.62	19
29.85	29.69	95	92	65.5	72	62	10	63	64	N.	N.	10	95	1.97	20
29.63	29.65	85	51	65.0	73	62	11	61	46	NW.	NW.	24	173	.06	21
29.73	29.68	66	97	54.0	63	46	17	46	50	SW.	W.	30	201	.58	22
29.90	29.89	62	77	53.5	63	45	18	38	49	NW.	NW.	26	313	.42	23
29.85	29.76	69	88	66.5	82	49	33	53	66	SW.	SW.	10	102	*T.	24
29.86	29.76	70	89	63.0	66	60	6	54	59	NW.	NE.	15	140	.02	25
29.82	29.88	94	83	57.0	67	56	11	54	53	NW.	E.	14	196	.86	26
29.74	29.64	100	92	57.0	63	52	11	54	58	E.	NE.	18	142	.89	27
29.75	29.81	86	67	61.5	75	50	25	55	53	NE.	SW.	12	112	.....	28
30.08	29.95	71	65	60.5	71	52	19	47	53	NE.	SE.	....	.....	.....	29
29.88	29.76	97	81	66.5	80	57	23	61	65	SE.	SE.	....	.....	1.42	30
29.71	29.64	86	95	70.0	73	63	10	67	68	SE.	.....	....	.....	2.25	31
926.18	924.62	2,303	2,239	1977.0	2,320	1,690	630	1,654	1,727	.....	.....	....	.....	10.69	
29.877	29.826	74.3	72.2	63.8	74.8	54.5	20.3	53.4	55.7	NW.	NW.	....	.....	.345	

* Trace of rain.

TABLE X CONTINUED.—JUNE, 1889.

Day of month.	Color.	Mortality. Total deaths, less those by violence.	Deaths by violence. Accidents and negligence.	Homicides.	Suicides.	Deaths by ages. 60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days, less those by violence.	One day old and under, less those by violence.	Scarlet fever.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
1	W.	4					2				1									1			1	1	4	10
	C.	6					3	1				1				3				1				1	6	
2	W.	8	1			4	3	2	2			1					1		1		1		1	3	9	14
	C.	5					1								1	1							2	1	5	
3	W.	8			1	1										3	1			1	1			2	9	14
	C.	5				1	2									1				1	1			2	5	
4	W.	10				2	5			1		1				1	1			3	2			1	10	14
	C.	4					3			1		1				1				1					4	
5	W.	6				2	1									1	1						1	3	6	10
	C.	4				1	2										1				1		1	1	4	
6	W.	11				3	3				1		1		1					2			1	5	11	19
	C.	8				1	3	2	1			1			1	2					1			3	8	
7	W.	7					3				2	1										1	2	1	7	17
	C.	10					4									2							2	6	10	
8	W.	3					1					1				2									3	12
	C.	9				1	5					1	1			2				3				2	9	
9	W.	9					7					2						1					2	4	9	15
	C.	6				2	2								1	1				1	1			2	6	
10	W.	6				2	2					1								1		1	1	2	6	12
	C.	6				2	2									2				2	1			1	6	
11	W.	4				1	2					2									1		1		4	11
	C.	7				2	4					2									1		2	2	7	
12	W.	11				2	7	1	1			4				2				1			1	3	11	15
	C.	4					2									2							1	1	4	
13	W.	6			1	1	2					1				3								2	7	13
	C.	6					4								1						1		2	2	6	
14	W.	9					6					4			1	1				1	1			1	9	15
	C.	6					4									1					1		2	2	6	
15	W.	8				1	5			1		3				1	1						2		8	18
	C.	10					5					3				3							1	3	10	
16	W.	8					6					2				1				2			2	1	8	18
	C.	10					8					2	1				1			2			2	2	10	
17	W.	8				2	5					3				1			1	1			2		8	16
	C.	8					5	1	1			3	1								1		1	2	8	
18	W.	9				2	4				1	2											3	3	9	16
	C.	7					6					3				1		1					1	1	7	
19	W.	7				2	3					2								1	1		2	1	7	12
	C.	5					4					3		1										1	5	
20	W.	8				4	2					2								1	2		1	2	8	14
	C.	5	1				2					2								1	1		1		6	
21	W.	14				3	8			1		4				1				1	1		1	5	14	30
	C.	16				2	6	1		1	1	2				2				2	2		2	4	16	
22	W.	10					8			1		4								1			1	3	10	16
	C.	6				2	1	1				1			1	1				1	2				6	
23	W.	14					10					2					1			7			1	3	14	26
	C.	11	1			1	8					3											2	6	12	
24	W.	7					5					3	1											3	7	14
	C.	6	1				3	1				1				1				1			2	1	7	
25	W.	8				2	3					2								2	2		1	1	8	19
	C.	11				2	4	1				1				2		1		2	1		1	3	11	
26	W.	9				4	3					2				1				1				5	9	21
	C.	10	2				8	1	1			3				1					1		1	4	12	
27	W.	14	1			1	9					5				1	1		1		1		1	4	15	20
	C.	5					4	2								1				2			1	1	5	
28	W.	5				3	1					1								1				3	5	16
	C.	9	2				8	1				5			1					1				2	11	
29	W.	9				3	3					1	1						1	2			2	2	9	16
	C.	6		1		1	2					1	1							2			2		7	
30	W.	12				2	6	2				2				1				2			1	6	12	21
	C.	8	1			2	4	2				2				2				1			1	2	9	
Totals	W.	252	2	..	2	47	125	5	3	4	5	58	3	..	2	20	7	1	4	32	13	2	31	70	256	484
	C.	219	8	1	...	20	119	14	3	2	1	41	4	1	6	32	2	2	..	24	16	..	30	58	228	
Means																										

TABLE X CONTINUED.—JUNE, 1889.

Meteorological conditions.														
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.		8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles.			
29.73	29.91	67	69	60.0	72	54	18	47	52	NW.	NW.	20	207	1.03	1
29.95	29.90	61	81	59.5	70	52	18	45	55	N.	S.	12	102	.....	2
29.90	29.76	70	92	64.0	76	56	20	54	62	S.	S.	6	61	.09	3
29.71	29.56	80	76	67.0	75	58	17	59	61	NW.	S.	12	118	.02	4
29.61	29.62	60	57	62.5	70	58	12	49	47	NW.	NW.	18	200	.....	5
29.71	29.75	58	49	62.0	71	54	17	45	45	NW.	W.	24	251	.....	6
29.95	29.80	68	50	64.5	77	48	29	50	49	W.	S.	16	173	.....	7
29.78	29.79	64	66	73.0	84	63	21	57	64	SW.	SW.	21	168	.....	8
29.87	29.91	82	79	76.0	85	68	17	68	71	S.	S.	16	194	*T.	9
29.99	29.98	86	83	75.5	85	68	17	69	72	SW.	SW.	25	135	.48	10
30.00	29.98	86	70	75.0	86	70	17	70	65	N.	NW.	23	101	.20	11
30.06	30.07	98	95	65.5	70	62	8	69	60	SW.	NE.	20	105	1.09	12
30.09	30.04	90	95	67.5	84	61	23	62	69	NE.	E.	7	58	.19	13
30.09	30.06	88	95	72.0	84	67	17	69	71	S.	N.	24	110	.59	14
30.06	29.98	82	71	76.5	86	68	18	69	68	S.	S.	24	188	.04	15
30.03	29.88	78	79	77.5	87	68	19	69	72	SW.	S.	10	98	.....	16
29.78	29.73	79	82	76.0	88	72	16	71	68	SW.	N.	18	153	.01	17
29.81	29.83	90	70	70.0	73	66	7	66	61	NE.	NE.	16	193	.01	18
29.84	29.72	89	88	66.5	74	60	14	59	68	NE.	E.	10	96	.....	19
29.77	29.84	80	74	77.0	89	67	22	70	68	E.	N.	13	123	.....	20
29.83	29.70	74	79	78.0	90	69	21	68	72	N.	S.	20	100	*T.	21
29.86	29.94	54	58	68.0	76	66	10	51	53	NW.	NW.	24	262	.08	22
30.16	30.19	59	77	63.0	75	53	22	48	57	N.	NW.	12	102	.....	23
30.33	30.30	67	63	65.0	73	52	21	53	53	NE.	NE.	12	121	.....	24
30.29	30.10	84	96	65.5	68	59	9	58	67	NE.	NE.	16	201	.60	25
30.02	29.98	86	82	73.5	78	67	11	70	67	S.	S.	15	179	.53	26
30.08	30.03	88	79	74.0	86	64	22	67	71	S.	S.	6	72	.....	27
30.06	30.03	82	82	73.5	85	65	20	68	67	S.	.....	8	71	.01	28
30.06	29.98	84	86	72.5	77	69	8	67	69	SE.	NE.	15	126	.04	29
30.03	30.00	90	85	73.0	79	68	11	67	71	NE.	.....	10	99	*T.	30
898.45	897.26	2,324	2,308	2,093.5	2,373	1,872	501	1,834	1,895	S.	S.	..	4,167	5.01	
29.948	29.909	77.5	76.9	69.8	79.1	62.4	16.7	61.1	63.2	.....	.....	....	138.9	.167	

*Trace of rain.

TABLE X CONTINUED.—JUNE, 1889.

Day of month.	Color.	Mortality.																														
		Total deaths, less those by violence.	Deaths by violence.			Deaths by ages.				Scarlet fever.	Diphtheria.	Diarrhœal diseases.	Typhoid fever.	Typho-malarial fever.	Malarial fever.	Phthisis pulmonalis.	Pneumonia.	Bronchitis.	Congestion of lungs.	Nervous diseases.	Diseases of the circulatory organs.	Rheumatism.	Diseases of digestive organs.	All other diseases.	Total deaths by color.	Total deaths.
			Accidents and negligence.	Homicides.	Suicides.	60 years and over, less those by violence.	Under 5 years, less those by violence.	Under 8 days, less those by violence.	One day old and under, less those by violence.																	
1	W.	4	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	1	4	10
	C.	6	...	...	...	3	...	1	...	...	...	1	...	...	...	3	...	...	...	1	...	...	...	1	6	
2	W.	8	1	...	...	4	3	2	...	...	...	1	...	...	...	...	1	...	1	...	1	...	1	3	9	14
	C.	5	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	2	1	5	
3	W.	8	...	...	1	1	...	...	...	...	...	...	...	...	...	3	1	...	...	1	1	...	...	2	9	14
	C.	5	...	...	...	1	2	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	2	5	
4	W.	10	...	...	...	2	5	...	...	1	...	1	...	...	...	1	1	...	...	3	2	...	...	1	10	14
	C.	4	...	...	...	...	3	...	...	1	...	1	...	...	...	1	...	...	...	1	...	...	...	...	4	
5	W.	6	...	...	...	2	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	1	3	6	10
	C.	4	...	...	...	1	2	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	1	4	
6	W.	11	...	...	...	3	3	...	...	...	1	...	1	...	1	...	...	...	...	2	...	...	1	5	11	19
	C.	8	...	...	...	1	3	2	1	...	...	1	...	...	1	2	...	...	...	...	1	...	...	3	8	
7	W.	7	...	...	...	...	3	...	...	...	2	1	...	...	...	...	...	...	...	...	...	1	2	1	7	17
	C.	10	...	...	...	...	4	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2	6	10	
8	W.	3	...	...	...	1	1	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	...	3	12
	C.	9	...	...	...	1	5	...	...	...	...	1	1	...	...	2	...	...	...	3	...	...	...	2	9	
9	W.	9	...	...	...	...	7	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	2	4	9	15
	C.	6	...	...	...	2	2	...	...	...	...	...	...	...	1	1	...	...	...	1	1	...	...	2	6	
10	W.	6	...	...	...	2	2	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	1	2	6	12
	C.	6	...	...	...	2	2	...	...	...	...	...	...	...	...	2	...	...	...	2	1	...	...	1	6	
11	W.	4	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	4	11
	C.	7	...	...	...	2	4	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	2	2	7	
12	W.	11	...	...	...	2	7	1	1	...	...	4	...	...	...	2	...	...	...	1	...	...	1	3	11	15
	C.	4	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	1	4	
13	W.	6	...	...	1	1	2	...	...	...	...	1	...	...	...	3	...	...	...	...	...	...	...	2	7	13
	C.	6	...	...	...	...	4	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	2	2	6	
14	W.	9	...	...	...	...	6	...	...	...	...	4	...	...	1	1	...	...	...	1	1	...	...	1	9	15
	C.	6	...	...	...	...	4	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	2	2	6	
15	W.	8	...	...	...	1	5	...	...	1	...	3	...	...	...	1	1	...	...	...	...	...	2	...	8	18
	C.	10	...	...	...	...	5	...	...	...	...	3	...	...	...	3	...	...	...	...	...	...	1	3	10	
16	W.	8	...	...	...	...	6	...	...	...	...	2	...	...	...	1	...	...	...	2	...	...	2	1	8	18
	C.	10	...	...	...	...	8	...	...	...	...	2	1	...	...	...	1	...	...	2	...	...	2	2	10	
17	W.	8	...	...	...	2	5	...	...	...	...	3	...	...	...	1	...	...	1	1	...	...	2	...	8	16
	C.	8	...	...	...	...	5	1	1	...	...	3	1	...	...	...	...	...	...	...	1	...	1	2	8	
18	W.	9	...	...	...	2	4	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	3	3	9	16
	C.	7	...	...	...	...	6	...	...	...	...	3	...	...	...	1	...	1	...	...	...	...	1	1	7	
19	W.	7	...	...	...	2	3	...	...	...	...	2	...	...	...	...	...	...	...	1	1	...	2	1	7	12
	C.	5	...	...	...	...	4	...	...	...	...	3	...	1	...	...	...	...	...	...	...	...	...	1	5	
20	W.	8	...	...	...	4	2	...	...	...	...	2	...	...	...	...	...	...	...	1	2	...	1	2	8	14
	C.	5	1	...	...	...	2	...	...	...	...	2	...	...	...	...	...	...	...	1	1	...	1	...	6	
21	W.	14	...	...	...	3	8	...	...	1	...	4	...	...	...	1	...	...	...	1	1	...	1	5	14	30
	C.	16	...	...	...	2	6	1	...	1	1	2	...	...	...	2	...	...	...	2	2	...	2	4	16	
22	W.	10	...	...	...	...	8	...	...	1	...	4	...	...	...	...	...	...	...	1	...	...	1	3	10	16
	C.	6	...	...	...	2	1	1	...	...	...	1	...	...	1	1	...	...	...	1	2	...	...	...	6	
23	W.	14	...	...	...	...	10	...	...	...	...	2	...	...	...	...	...	1	...	7	...	...	1	3	14	26
	C.	11	1	...	...	1	8	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	2	6	12	
24	W.	7	...	...	...	...	5	...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	3	7	14
	C.	6	1	...	...	...	3	1	...	...	...	1	...	...	...	1	...	...	...	1	...	...	2	1	7	
25	W.	8	...	...	...	2	3	...	...	...	...	2	...	...	...	...	...	...	...	2	2	...	1	1	8	19
	C.	11	...	...	...	2	4	1	...	...	...	1	...	...	...	2	...	1	...	2	1	...	1	3	11	
26	W.	9	...	...	...	4	3	...	...	...	...	2	...	...	...	1	...	...	...	1	...	...	...	5	9	21
	C.	10	2	...	...	...	8	1	1	...	...	3	...	...	...	1	...	...	...	...	1	...	1	4	12	
27	W.	14	1	...	...	1	9	...	...	...	...	5	...	...	...	1	1	...	1	...	1	...	1	4	15	20
	C.	5	...	...	...	...	4	2	...	...	...	...	...	...	...	1	...	...	...	2	...	...	1	1	5	
28	W.	5	...	...	...	3	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	3	5	16
	C.	9	2	...	...	...	8	1	...	...	...	5	...	...	1	...	...	...	...	1	...	...	...	2	11	
29	W.	9	...	...	...	3	3	...	...	...	...	1	1	...	...	...	...	1	2	...	...	...	2	2	9	16
	C.	6	...	1	...	1	2	...	...	...	...	1	1	...	...	...	...	...	...	2	...	...	2	...	7	
30	W.	12	...	...	...	2	6	2	...	...	...	2	...	...	...	1	...	...	...	2	...	...	1	6	12	21
	C.	8	1	...	...	2	4	2	...	...	...	2	...	...	...	2	...	...	...	1	...	...	1	2	9	
Totals	W.	252	2	..	2	47	125	5	3	4	5	58	3	..	2	20	7	1	4	32	13	2	31	70	256	484
	C.	219	8	1	...	20	119	14	3	2	1	41	4	1	6	32	2	2	..	24	16	..	30	58	228	
Means																										

TABLE X CONTINUED.—JUNE, 1889.

Meteorological conditions.															
Daily barometer.		Relative humidity.		Exposed bulb.				Daily dew-point.		Direction of wind.			Total movement of wind.	Daily rain-fall.	Day of month.
8 a. m.		8 a. m.	8 p. m.	Daily mean.	Maximum.	Minimum.	Range.	8 a. m.	8 p. m.	8 a. m.	8 p. m.	Extreme daily velocity, miles.			
29.73	29.91	67	69	60.0	72	54	18	47	52	NW.	NW.	20	207	1.03	1
29.95	29.90	61	81	59.5	70	52	18	45	55	N.	S.	12	102	.....	2
29.90	29.76	70	92	64.0	76	56	20	54	62	S.	S.	6	61	.09	3
29.71	29.56	80	76	67.0	75	58	17	59	61	NW.	S.	12	118	.02	4
29.61	29.62	60	57	62.5	70	58	12	49	47	NW.	NW.	18	200	.....	5
29.71	29.75	58	49	62.0	71	54	17	45	45	NW.	W.	24	251	.....	6
29.95	29.80	68	50	64.5	77	48	29	50	49	W.	S.	16	173	.....	7
29.78	29.79	64	66	73.0	84	63	21	57	64	SW.	SW.	21	168	.....	8
29.87	29.91	82	79	76.0	85	68	17	68	71	S.	S.	16	194	*T.	9
29.99	29.98	86	83	75.5	85	68	17	69	72	SW.	SW.	25	135	.48	10
30.00	29.98	86	70	75.0	86	70	17	70	65	N.	NW.	23	101	.20	11
30.06	30.07	98	95	65.5	70	62	8	69	60	SW.	NE.	20	105	1.09	12
30.09	30.04	90	95	67.5	84	61	23	62	69	NE.	E.	7	58	.19	13
30.09	30.06	88	95	72.0	84	67	17	69	71	S.	N.	24	110	.59	14
30.06	29.98	82	71	76.5	86	68	18	69	68	S.	S.	24	188	.04	15
30.03	29.88	78	79	77.5	87	68	19	69	72	SW.	S.	10	98	.....	16
29.78	29.73	79	82	76.0	88	72	16	71	68	SW.	N.	18	153	.01	17
29.81	29.83	90	70	70.0	73	66	7	66	61	NE.	NE.	16	193	.01	18
29.84	29.72	89	88	66.5	74	60	14	59	68	NE.	E.	10	96	.....	19
29.77	29.84	80	74	77.0	89	67	22	70	68	E.	N.	13	123	.....	20
29.83	29.70	74	79	78.0	90	69	21	68	72	N.	S.	20	100	*T.	21
29.86	29.94	54	58	68.0	76	66	10	51	53	NW.	NW.	24	262	.08	22
30.16	30.19	59	77	63.0	75	53	22	48	57	N.	NW.	12	102	.....	23
30.33	30.30	67	63	65.0	73	52	21	53	53	NE.	NE.	12	121	.....	24
30.29	30.10	84	96	65.5	68	59	9	58	67	NE.	NE.	16	201	.60	25
30.02	29.98	86	82	73.5	78	67	11	70	67	S.	S.	15	179	.53	26
30.08	30.03	88	79	74.0	86	64	22	67	71	S.	S.	6	72	.....	27
30.06	30.03	82	82	73.5	85	65	20	68	67	S.	.....	8	71	.01	28
30.06	29.98	84	86	72.5	77	69	8	67	69	SE.	NE.	15	126	.04	29
30.03	30.00	90	85	73.0	79	68	11	67	71	NE.	.....	10	99	*T.	30
898.45	897.26	2,324	2,308	2,093.5	2,373	1,872	501	1,834	1,895	S.	S.	..	4,167	5.01	
29.948	29.909	77.5	76.9	69.8	79.1	62.4	16.7	61.1	63.2	.....	.....	....	138.9	.167	

*Trace of rain.

TABLE XI.—*Showing deaths arranged according to age, sex, and color, with percentages, for thirteen years ending June 30, 1889.*

WHITE MALES.

Thirteen years ending June 30, 1889.	Total deaths.	5 years and over.		20 years and over.		40 years and over.	
		No. of deaths.	Percentage to total deaths.	No. of deaths.	Percentage to total deaths.	No. of deaths.	Percentage to total deaths.
1877	1,148	725	63.15	633	55.14	432	37.63
1878	1,125	683	60.71	568	50.49	380	33.78
1879	1,130	689	60.97	562	49.73	384	33.98
1880	1,097	711	64.81	641	58.43	459	41.84
1881	1,179	791	67.10	709	60.14	509	43.17
1882	1,254	854	68.10	751	59.88	541	43.14
1883	1,196	820	68.53	709	59.28	533	44.57
1884	1,322	885	66.94	764	57.79	572	43.12
1885	1,375	957	69.67	841	61.16	601	43.71
1886	1,312	949	72.33	841	64.10	610	46.49
1887	1,343	940	69.84	845	62.91	596	44.38
1888	1,456	978	67.14	875	60.06	651	44.77
1889	1,458	969	66.46	873	60.00	648	44.44
Total deaths and mean percentages to total deaths	16,395	10,951	67.44	9,612	58.62	6,916	42.18

WHITE FEMALES.

1877	1,039	621	59.77	522	50.24	339	32.63
1878	1,041	653	62.73	541	51.97	354	32.61
1879	1,066	647	60.69	535	50.19	334	31.33
1880	988	592	59.92	529	53.54	351	35.53
1881	1,026	716	69.78	611	59.55	404	39.38
1882	1,099	731	66.52	631	57.42	410	37.31
1883	1,074	728	67.78	632	58.85	439	40.88
1884	1,254	801	63.88	687	54.78	465	37.08
1885	1,235	832	67.37	705	57.08	489	39.59
1886	1,130	803	71.06	702	62.12	458	40.53
1887	1,141	809	70.20	697	61.08	488	42.77
1888	1,322	898	67.92	791	59.83	530	40.09
1889	1,255	845	67.33	733	58.40	511	40.74
Total deaths and mean percentages to total deaths	14,670	9,667	65.77	8,316	56.54	5,572	37.72
Total white	31,065	20,618	66.60	17,928	57.58	12,488	39.95

COLORED MALES.

1877	988	417	42.20	337	34.11	206	20.85
1878	1,007	394	39.13	311	30.88	197	19.56
1879	1,651	430	40.91	348	33.11	200	19.89
1880	1,025	407	39.71	325	31.71	186	18.15
1881	921	424	46.04	347	37.68	210	22.80
1882	1,062	500	47.08	402	37.85	245	23.07
1883	1,004	504	50.20	397	39.54	257	25.20
1884	1,081	481	44.50	381	35.24	242	22.39
1885	1,210	587	48.51	476	39.34	300	24.70
1886	1,077	574	53.29	458	42.52	297	27.57
1887	1,079	536	49.67	427	39.60	270	25.02
1888	1,049	536	51.09	440	41.94	301	28.69
1889	1,180	583	49.41	475	40.25	289	24.50
Total deaths and mean percentages to total deaths	13,734	6,373	46.40	5,124	37.30	3,205	23.30

TABLE XI.—*Showing deaths arranged according to age, sex, and color, etc.*—Continued.

COLORED FEMALES.

Thirteen years ending June 30, 1889.	Total deaths.	5 years and over.		20 years and over.		40 years and over.	
		No. of deaths.	Percentage to total deaths.	No. of deaths.	Percentage to total deaths.	No. of deaths.	Percentage to total deaths.
1877	1,033	518	50.15	396	38.33	221	21.39
1878	1,058	504	47.64	374	35.35	208	19.66
1879	1,062	523	49.25	424	39 92	230	21.06
1880	1,096	537	49 00	434	39.60	237	21.62
1881	1,010	525	51.91	448	44.36	231	22.87
1882	1,156	613	53.03	490	42.39	282	24.30
1883	1,012	540	53.36	422	41.70	243	24.01
1884	1,157	607	52.46	466	40.28	261	22.56
1885	1,178	664	56.37	510	43.29	319	27.89
1886	1,155	652	56.45	516	44.67	297	25.71
1887	1,102	598	54.26	459	41.65	284	25.77
1888	1,213	686	56.60	547	41.10	303	25.00
1889	1,269	666	52.90	509	40.43	293	23.27
Total deaths and mean percentages to total deaths	14,491	7,633	52.67	5,995	41.37	3,409	23.52
Total colored	28,225	14,006	49.53	11,119	39.33	6,614	23.41

TABLE XII.—*Deaths and average ages (in years, months, and days) in nine years from July 1, 1881, to June 30, 1889, inclusive.*

WHITE.

Year.	All ages.				5 years and over.				20 years and over.				40 years and over.			
	Total.	Average.			Total.	Average.			Total.	Average.			Total.	Average.		
		y.	m.	d.		y.	m.	d.		y.	m.	d.		y.	m.	d.
1881	2,205	32	0	1	1,507	46	3	0	1,320	51	3	0	913	60	6	26
1882	2,353	32	1	6	1,585	46	7	5	1,382	51	7	23	951	62	3	13
1883	2,270	32	4	22	1,548	45	9	2	1,341	51	10	29	972	60	10	29
1884	2,576	31	1	28	1,686	46	8	13	1,451	52	5	15	1,037	61	1	28
1885	2,610	32	3	4	1,789	46	2	17	1,546	51	3	17	1,090	61	3	18
1886	2,442	34	6	19	1,752	46	10	22	1,543	51	8	20	1,068	61	10	1
1887	2,484	34	1	17	1,740	47	7	15	1,542	52	3	6	1,084	61	11	19
1888	2,778	33	2	28	1,876	48	0	28	1,666	52	10	12	1,181	62	5	14
1889	2,713	32	8	6	1,814	47	11	2	1,606	52	6	5	1,159	61	5	11
Totals and means	22,431	32	8	21	15,297	46	10	21	13,397	51	11	26	9,455	61	6	17

COLORED.

1881	1,931	20	11	6	949	41	9	13	795	47	8	10	441	63	1	4
1882	2,218	21	5	23	1,113	41	0	3	892	48	5	16	527	61	11	16
1883	2,016	21	9	17	1,044	40	8	23	821	48	10	7	496	61	2	27
1884	2,238	19	11	13	1,088	40	5	23	847	49	1	3	507	61	2	3
1885	2,388	22	7	29	1,249	40	6	18	986	50	0	22	618	62	11	2
1886	2,232	22	11	17	1,226	41	4	4	974	47	6	20	594	62	0	14
1887	2,181	22	0	7	1,134	41	3	22	886	49	4	16	554	59	6	23
1888	2,262	22	11	3	1,222	41	9	22	987	48	8	2	604	60	8	13
1889	2,439	21	11	24	1,249	40	11	8	984	47	6	13	582	60	3	22
Totals and means	19,905	21	9	27	21,274	41	1	8	8,172	48	7	2	4,923	61	2	17

TABLE XIII.—*Deaths under one month of age from convulsions and trismus nascentium, by age, months, and sanitary divisions, for the year ending June 30, 1889.*

BY AGE.

	Convulsions.					Trismus nascentium.				
	White.		Colored.		Total.	White.		Colored.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.	
Under one day	...	...	...	...	...	...	...	...	1	1
One day to two days	...	...	3	2	5	1	1	...	1	3
Two days to three days	..	..	2	1	3	1	..	...	..	1
Three days to four days	1	3	...	2	6	...	...	..	1	1
Four days to five days	1	2	2	1	6	1	1	..	...	2
Five days to six days	...	...	3	...	3	1	...	2	1	4
Six days to seven days	1	1	1	2	5	...	...	...	4	4
Seven days to eight days	...	2	3	2	7	...	1	7	7	15
Eight days to nine days	...	...	1	3	4	...	...	6	3	9
Nine days to ten days	...	..	2	1	3	...	1	1	6	8
Ten days to eleven days	3	...	1	2	6	1	...	1	...	2
Eleven days to twelve days	...	...	...	1	1	...	...	..	...	...
Twelve days to thirteen days	...	..	...	1	1	..	1	...	2	3
Thirteen days to two weeks	...	..	1	..	1	...	...	1	..	1
Two weeks to three weeks	...	3	8	1	12	1	..	..	...	1
Three weeks to four weeks	1	1	3	2	7	.		2	1	3
Total	7	12	30	21	70	6	5	20	27	58

BY MONTHS.

July	...	1	1	1	3	1	3	4	5	13
August	...	...	4	1	5	1	..	3	2	6
September	1	2	2	2	7	...	1	3	1	5
October	1	3	4	2	10	..	...	3	2	5
November	1	3	1	1	6	...	...	3	3	6
December	...	..	8	2	10	...	...	...	3	3
January	1	..	3	4	8	...	..	...	...	...
February	...	...	2	...	2	...	...	...	1	1
March	1	2	2	1	6	1	...	..	1	2
April	1	...	...	1	2	1	.	2	3	6
May	1	...	1	4	6	1	1	1	2	5
June	...	1	2	2	5	1	...	1	4	6
Total	7	12	30	21	70	6	5	20	27	58

BY SANITARY DIVISION.

First sanitary division	...	...	...	...	...	1	1	...	...	2
Second sanitary division	1	1	...	1	3	1	..	...	...	1
Third sanitary division	1	3	2	..	6	..	...	1	..	1
Fourth sanitary division	...	...	5	3	8	...	...	4	4	8
Fifth sanitary division	2	...	1	1	4	1	...	1	8	10
Sixth sanitary division	...	1	...	2	3	1	...	1	1	3
Seventh sanitary division	1	4	6	4	15	..	1	4	6	11
Eighth sanitary division	...	1	2	4	7	1	..	...	1	2
Ninth sanitary division	...	1	2	...	3	1	...	3	3	7
Tenth sanitary division	2	..	4	3	9	...	1	3	1	5
Eleventh sanitary division	...	1	6	.	7	...	2	3	3	8
Twelfth sanitary division	...	..	2	3	5	...	..	...	...	...
Total	7	12	30	21	70	6	5	20	27	58

TABLE XIV.—STILL-BIRTHS.—*Cause, legitimacy, period of utero gestation, and by whom reported, for the year ending June 30 1889.*

	White.		Colored.		
	Male.	Female.	Male.	Female.	Total.
Legitimacy:					
Legitimate	79	58	88	75	300
Illegitimate	12	8	71	52	143
Total	91	66	159	127	443
Period of utero-gestation:					
Fourth month and under	4	1	6	9	20
Fifth month	9	2	7	5	23
Sixth month	6	7	32	18	63
Seventh month	14	10	23	19	66
Eighth month	10	9	21	18	58
Ninth month	40	36	64	53	193
Tenth month	1	...	1	...	2
Unknown and not stated	7	1	5	5	18
Total	91	66	159	127	443
By whom reported:					
Physicians	68	50	65	46	229
Midwives	1	4	6	11	22
Coroner	8	3	40	25	76
Medical sanitary inspector	14	9	48	45	116
Total	91	66	159	127	443
Causes:					
Albuminuria	..	2	....	...	2
Asphyxia	..	3	....	2	5
Atelectasis	1	...	....	...	1
Contracted and deformed pelvis	3	1	...	....	4
Diseased placenta	....	3	...	....	3
Epilepsy of mother	....	1	....	1	2
Ergot, misuse of	1	..	....	....	1
Fall	1	3	16	9	29
Fright	2	2	2	3	9

	White.		Colored.		
	Male.	Female.	Male.	Female.	Total.
Causes—continued.					
Hemorrhage	2	..	...	2	4
Hydrocephalus	..	..	2	..	2
Hydrops amnii	2	....		1	3
Ill-health of mother	3	1	4	3	11
Injury to mother by penholder	1	....	..	...	1
In utero	1	....	2	2	5
Instrumental delivery	1	1	...	2	4
Long journey	1		....	1	2
Neglect	....	..	1	..	1
Nervous prostration	1	....	..	..	1
Overwork and heavy lifting	2	1	15	18	36
Placenta previa	4	4	3	3	14
Predisposition to abortion	2	1	10	9	22
Preternatural	....	....	....	1	1
Premature birth	9	3	19	18	49
Presentation:					
Arm	....	....	..	1	1
Breech	1	2	....		3
Cord	1	..	....	..	1
Feet	2	....	2	2	6
Transverse	1	....	2	....	3
Puerperal convulsions	1	3	2	....	6
Pressure on cord	....	4	2	....	6
Prolonged and difficult labor	11	7	6	2	26
Prolapsus funis	....	....	1	2	3
Rupture of amnion	1	..	....	..	1
Syphilis congenital	2	....	5	2	9
Strangulation of cord	1	....	1	1	3
Twins	....	1	6	....	7
Unknown	33	23	58	42	156
Total	91	66	159	127	443

TABLE XV.—BIRTHS.—*Statement by months and quarters for the year ending June 30, 1889.*

	Total.	White.		Colored.		Twins.		Triplets.		Illegitimates.		Attended by physicians.		Attended by midwives.	
		Male.	Female.	Male.	Female.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.
1888.															
July	303	74	87	75	67	....	4	..	...	4	22	81	25	80	117
August	438	127	110	101	100	6	8	.	...	7	41	134	55	103	146
September	309	83	69	74	83	2	2	...	.....	4	35	73	47	79	110
Total first quarter	1,050	284	266	250	250	8	14	....	....	15	98	288	127	262	373
October	346	100	93	74	79	6	2	..	....	10	31	105	35	88	118
November	256	66	67	66	57	6	6	....	3	8	25	58	40	75	83
December	311	100	82	74	55	2	4	...	....	6	30	95	25	87	104
Total second quarter	913	266	242	214	191	14	12	....	3	24	86	258	100	250	305
1889.															
January	409	116	111	91	91	6	4	6	....	3	47	106	46	121	136
February	306	95	77	67	67	4	4	3	3	8	39	81	26	91	108
March	326	91	92	87	56	2	4	3	3	7	51	91	53	92	90
Total third quarter	1,041	302	280	245	214	12	12	12	6	18	137	278	125	304	334
April	283	76	76	62	69	4	2	3	3	2	32	76	28	76	103
May	328	85	91	83	69	8	8	....	....	7	32	103	33	73	119
June	386	112	96	96	82	2	4	....	....	12	43	132	55	76	123
Total fourth quarter	997	273	263	241	220	14	14	3	3	21	107	311	116	235	345
Total by sex and color	4,001	1,125	1,051	950	875	....	....	..	..	....	..	.....	..	.....	.....
Total by color	....	2,176		1,825		48	52	15	12	78	428	1,135	468	1,041	1,357
Total for year	4,001	4,001				100		27		506		1,603		2,398	

TABLE XVI.—BIRTHS.—*Number of births (reported) in different hospitals during the year ending June 30, 1889.*

Months.	Color.	Sex.	Columbia Hospital.	Freedmen's Hospital.	Washington Asylum Hospital.
1888.					
July	White	Male			1
		Female		1	
	Colored	Male	1	5	
		Female		5	2
August	White	Male	5		
		Female	10		
	Colored	Male	2	9	1
		Female	9	10	1
September	White	Male	3		1
		Female	2		
	Colored	Male	9	4	
		Female	6	3	1
October	White	Male	7		
		Female	1	1	
	Colored	Male	7	8	
		Female	9	5	
November	White	Male	3		
		Female	4		
	Colored	Male	6	5	
		Female	3	3	1
December	White	Male	2		
		Female	2	1	
	Colored	Male	1	5	1
		Female	3	3	
1889.					
January	White	Male	5	1	
		Female	3		
	Colored	Male	4	14	1
		Female	6	10	
February	White	Male	2		
		Female	2		
	Colored	Male	8	4	
		Female	1	2	1
March	White	Male	3	1	1
		Female	2		
	Colored	Male	3	15	
		Female	2	7	2
April	White	Male	2		
		Female	3		
	Colored	Male	4	5	1
		Female	5	4	
May	White	Male	5		
		Female	2		
	Colored	Male	2	5	3
		Female	2	4	1
June	White	Male	4	1	
		Female	7	1	1
	Colored	Male	6	9	4
		Female	5	4	1

RECAPITULATION.

	Total.	White.	Colored.	Male.	Female.
Columbia Hospital	183	79	104	94	89
Freedmen's Hospital	155	7	148	91	64
Washington Asylum Hospital	25	4	21	14	11
Total	363	90	273	199	164

TABLE XVII.—MARRIAGES (REPORTED).—*Number of brides and grooms, year ending June 30, 1889.*

Number of marriages of grooms.	Number of marriages of brides.				
	First marriage.	Second marriage.	Third marriage.	Sixth marriage.	Total.
Whites:					
First marriage	703	44	1	.....	748
Second marriage	75	41	4	.....	120
Third marriage	3	3	1	.....	7
Fourth marriage	1	2	.....	.....	3
Total	782	90	6	.....	878
Colored:					
First marriage	202	13	1	.....	216
Second marriage	43	18	....	....	61
Third marriage	2	1	.... ..	1	4
Total	247	32	1	1	281
Mixed:					
First marriage	2	1	.... ..	.....	3
Grand total	1,031	123	7	1	1,162

TABLE XVIII.—MARRIAGES (REPORTED).—*Nationality of brides and grooms of white race, year ending June 30, 1889.*

Birthplace of grooms.	Birthplace of brides.												
	United States.	Germany.	England.	Ireland.	Scotland.	Russia.	Italy.	Pacific islands.	Dominion of Canada.	France.	Sweden.	Mixed as to color.	Total.
United States	757	21	8	4	....	....	..	1	1	2	1	...	795
Germany	5	37	....	....	....	....	....	....	....	..	....	....	42
England	13	....	3	1	....	..	....	....	....	....	....	....	17
Ireland	4	....	....	1	....	....	....	....	....	....	....	....	5
Scotland	....	....	....	....	1	....	....	....	....	....	....	....	1
Russia	1	....	1	....	....	2	....	....	....	....	....	....	4
Italy	1	....	....	....	....	....	1	....	....	....	....	....	2
Switzerland	2	1	1	....	....	....	....	....	....	....	....	....	4
Spain	1	....	....	....	....	....	....	....	....	....	....	1	2
Pacific islands	1	....	....	....	....	....	....	....	....	....	....	....	1
Dominion of Canada	2	....	....	....	....	....	....	....	....	....	....	....	2
France	2	....	....	....	....	....	....	....	....	1	....	....	3
Denmark	1	....	....	....	....	....	....	....	....	....	....	....	1
Mixed as to color	2	....	....	....	....	....	....	....	....	....	....	....	2
Total	792	59	13	6	1	2	1	1	1	3	1	1	881

TABLE XIX.—MARRIAGES (REPORTED).—*Ages of brides and grooms (white) during the year ending June 30, 1889.*

Ages of grooms.	Ages of brides.							
	Under 20 years.	20 to 25 years.	25 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	Not given.	Total.
Under 20 years	13	3	.....	.....	.....	.....	.....	16
20 to 25 years	123	*147	15	3	.....	.....	.....	288
25 to 30 years	57	143	58	12	2	.....	.....	272
30 to 40 years	*19	66	56	32	5	.....	.....	178
40 to 50 years	.....	*13	19	33	16	2	.....	83
50 to 60 years	1	5	2	10	7	1	.....	26
60 to 70 years	1	1	1	4	3	4	.....	14
Not given	.....	1	.....	.....	.....	.....	3	4
Total	214	379	151	94	33	7	3	881

*Including three mixed marriages; two white grooms and colored brides, and one colored groom and white bride.

TABLE XX.—MARRIAGES (REPORTED).—*Ages of brides and grooms (colored) during the year ending June 30, 1889.*

Ages of grooms.	Ages of brides.							
	Under 20 years.	20 to 25 years.	25 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	Not given.	Total.
Under 20 years	4	2	.....	.....	.....	.....	.....	6
20 to 25 years	46	49	7	1	.....	.....	.....	103
25 to 30 years	6	44	11	1	.....	.....	3	65
30 to 40 years	3	28	17	13	2	.....	.....	63
40 to 50 years	.....	5	8	11	5	1	1	31
50 to 60 years	.....	.....	3	4	5	.....	.....	12
60 to 70 years	.....	.....	.....	.....	1	.....	.....	1
Total	59	128	46	30	13	1	4	281

TABLE XXI.—*Deaths and death-rates for the past Fourteen Years.*

Years.	January.					February.					March.				
	White.		Colored.		Annual death-rate for total population.	White.		Colored.		Annual death-rate for total population.	White.		Colored		Annual death-rate for total population.
	Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.	
1875..	211	24.33	186	45.65	31.15	176	22.05	209	55.71	32.81	239	27.54	192	47.36	33.89
1876..	160	17.99	137	32.32	22.61	148	17.48	162	40.17	24.58	193	21.58	173	40.82	27.79
1877..	182	19.94	147	33.36	24.31	172	20.47	175	43.14	27.86	199	21.81	168	36.24	27.12
1878..	178	19.01	165	36.03	24.60	158	18.34	128	39.35	22.28	198	21.15	148	32.31	24.82
1879..	212	22.07	162	34.03	26.04	161	18.21	174	39.70	25.33	180	18.74	197	41.38	26.24
1880..	168	17.05	156	31.51	21.89	196	20.43	181	38.45	20.57	155	15.73	198	40.00	23.85
1881..	202	19.98	138	26.81	22.29	176	18.91	186	39.25	25.73	187	18.50	185	35.95	24.39
1882..	168	16.20	165	30.84	21.18	171	17.91	196	39.79	25.36	218	21.02	170	31.77	24.68
1883..	182	17.29	158	28.87	21.25	170	17.54	158	31.59	22.27	236	22.42	196	35.81	27.00
1884..	252	23.14	201	34.81	27.18	202	19.51	200	36.42	25.37	233	21.39	181	31.34	24.34
1885..	196	18.00	182	31.52	22.68	232	23.13	213	40.06	29.00	253	23.23	214	37.05	28.02
1886..	225	19.85	153	26.61	22.13	196	18.79	203	38.35	25.37	246	21.71	197	33.39	25.64
1887..	210	16.80	159	25.44	19.68	165	13.20	145	23.20	20.42	213	17.04	170	27.20	20.42
1888..	221	15.80	187	28.05	19.58	251	17.72	182	27.30	20.78	292	20.60	256	35.40	25.34
Total.	2,767	.....	2,296	.....	.....	2,571	.....	2,512	.....	.....	3,041	.....	2,621	.....	.....
Mean.	197.6	19.09	164.0	31.84	24.30	183.6	18.15	180.0	37.68	25.26	217.2	20.89	187.3	36.16	25.96

Years	April.					May.					June.				
	White.		Colored.		Annual death-rate for total population.	White.		Colored.		Annual death-rate for total population.	White.		Colored.		Annual death-rate for total population.
	Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.	
1875..	174	20.07	168	41.23	26.53	144	16.61	159	39.02	23.71	210	24.22	220	53.99	33.74
1876..	143	16.08	153	36.12	22.54	141	15.85	138	32.57	21.24	253	28.44	238	56.15	37.39
1877..	148	16.22	145	32.91	21.65	156	17.10	132	29.96	21.28	187	20.49	204	45.62	28.67
1878..	145	15.49	174	37.99	22.70	190	20.30	184	40.17	26.83	210	22.43	226	49.34	31.27
1879..	176	18.33	158	33.19	23.25	148	15.44	148	31.09	20.61	231	24.05	213	44.74	30.91
1880..	160	16.24	165	33.33	21.95	165	16.75	183	36.97	23.51	220	22.33	238	48.08	30.94
1881..	191	18.90	194	37.69	25.24	175	17.31	121	23.51	19.46	170	16.82	150	29.15	20.98
1882..	178	17.16	160	29.90	21.50	155	14.95	171	32.42	29.72	200	19.29	190	35.51	24.81
1883..	219	20.81	162	29.60	23.81	203	19.29	153	27.95	22.25	199	18.91	169	30.88	23.00
1884..	225	21.42	175	30.30	24.00	177	16.25	172	29.78	20.94	234	21.48	209	36.19	26.58
1885..	210	19.28	220	38.10	25.80	181	16.62	207	35.84	23.28	248	22.77	261	45.19	30.54
1886..	184	16.32	194	33.74	22.13	158	13.91	170	29.69	19.26	193	17.03	195	33.91	22.71
1887..	182	14.56	173	27.68	18.93	159	12.72	172	27.52	17.65	262	20.96	237	37.92	26.61
1888..	211	14.90	196	29.40	19.53	185	13.06	162	24.30	16.60	247	17.40	218	32.70	22.32
Total.	2,546	.....	2,437	.....	.....	2,337	.....	2,272	.....	.....	3,064	.....	2,965	.....	.....
Mean.	181.8	17.56	174.0	33.65	22.85	167.0	16.15	162.3	31.48	21.24	218.8	21.18	211.8	41.38	27.89

TABLE XXI.—*Deaths and death-rates for the past Fourteen Years*—Continued.

Years	July.					August.					September.				
	White.		Colored.		Annual death-rate for total population.	White.		Colored.		Annual death-rate for total population.	White		Colored.		Annual death-rate for total population.
	Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.	
1875	223	25.46	203	54.63	32.77	227	25.81	218	52.12	34.01	162	18.68	194	47.61	27.93
1876	298	32.78	269	57.62	42.24	209	22.88	188	43.39	29.44	172	19.34	177	41.74	26.57
1877	224	24.07	232	46.15	34.59	206	22.25	208	46.42	30.11	164	17.97	154	34.95	23.38
1878	232	23.12	251	50.00	33.14	201	20.94	224	47.93	29.77	156	16.66	147	32.10	21.73
1879	250	25.49	242	45.47	33.40	182	18.47	179	36.33	24.56	154	16.04	171	35.92	22.62
1880	195	19.15	179	49.08	24.53	154	15.23	171	33.55	21.37	197	19.99	168	33.94	24.66
1881	246	22.77	245	29.44	30.77	208	20.07	226	42.90	27.76	201	19.84	202	39.12	26.35
1882	220	21.70	214	36.01	27.63	165	15.54	176	32.05	21.17	141	13.57	163	30.36	18.23
1883	300	28.14	210	30.88	31.59	198	18.41	201	36.02	24.57	168	15.76	168	30.10	20.68
1884	263	20.44	202	36.19	25.50	245	22.49	199	34.46	26.64	236	21.67	190	32.90	25.56
1885	323	28.50	272	47.39	34.82	210	18.53	183	32.69	22.13	194	17.12	169	29.39	21.25
1886	218	18.61	222	38.06	25.14	226	18.88	203	34.80	24.17	247	21.17	192	32.91	25.09
1887	316	28.13	235	37.60	29.07	224	17.92	188	30.08	21.98	233	18.64	200	32.00	23.10
1888	272	19.20	243	36.45	24.72	264	18.63	279	41.85	26.06	214	15.10	210	31.50	20.35
Total	3,521	.....	3,239	.....	.....	2,913	.....	2,848	.....	.....	2,639	.....	2,505	.....	.....
Mean	251.5	24.18	231.5	42.49	30.69	208.0	19.71	203.4	38.89	25.98	188.5	17.97	179.0	34.57	23.40

Years	October.					November.					December.				
	White.		Colored.		Annual death-rate for total population.	White.		Colored.		Annual death-rate for total population.	White.		Colored.		Annual death-rate for total population.
	Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.		Deaths.	Annual death-rate.	Deaths.	Annual death-rate.	
1875	147	16.95	170	41.72	24.87	143	16.49	142	34.85	22.36	147	16.95	146	35.83	22.99
1876	164	18.41	167	39.40	25.20	135	15.19	119	28.08	19.34	165	18.55	133	31.38	22.69
1877	181	19.53	152	34.59	24.61	155	16.99	129	29.28	20.99	157	17.20	145	32.91	22.32
1878	185	19.76	146	31.88	23.74	155	16.56	141	30.79	21.23	169	18.05	152	33.19	23.02
1879	129	13.47	127	28.68	17.82	147	15.31	130	27.31	19.28	162	16.87	151	31.72	24.79
1880	188	19.08	176	35.55	24.59	162	16.44	134	27.07	20.00	211	21.41	129	26.05	22.97
1881	234	23.10	179	34.67	27.00	211	20.83	169	32.73	23.76	173	17.08	145	28.08	20.79
1882	180	17.32	176	32.78	22.50	162	15.59	154	28.69	20.05	183	17.61	137	25.52	20.20
1883	150	14.16	133	23.83	17.48	182	17.07	175	31.34	21.98	254	23.82	213	37.84	28.69
1884	193	17.72	175	30.30	22.08	204	18.73	148	25.63	21.12	188	17.26	177	30.65	21.90
1885	159	14.03	166	28.87	19.02	158	14.68	169	29.39	19.14	195	17.21	161	28.00	20.35
1886	221	18.94	188	32.23	23.37	194	16.63	166	28.46	20.57	192	16.43	154	26.34	19.77
1887	217	17.36	141	22.56	18.76	175	14.00	168	26.88	18.29	212	16.96	149	23.84	19.25
1888	227	16.02	201	30.15	20.54	189	13.34	148	22.20	16.17	208	14.68	142	21.30	17.98
Total	2,576	.....	2,297	.....	.....	2,372	.....	2,042	.....	.....	2,616	.....	2,134	.....	.....
Mean	184.0	17.30	164.0	32.01	22.25	169.4	16.28	149.4	28.76	20.30	186.8	18.0	152.4	29.47	21.77

TABLE XXII.—*Deaths of children under one year of age, by months, sex, and color, during fourteen years from July 1, 1875, to June 30, 1889.*

Year.	July.					August.					September.				
	White.		Colored.		Total.	White.		Colored.		Total.	White.		Colored.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.	
1876	58	57	50	55	220	37	43	32	37	149	25	17	34	36	112
1877	35	47	48	51	181	27	39	30	28	124	15	16	16	10	57
1878	21	27	29	31	108	37	28	43	41	149	14	13	26	27	80
1879	34	31	44	57	166	23	31	46	42	142	14	23	22	19	78
1880	57	54	66	43	220	27	27	48	27	129	22	14	26	24	86
1881	38	36	36	47	157	22	16	27	36	101	12	15	38	29	94
1882	47	46	65	62	220	38	30	35	45	148	32	28	29	31	120
1883	63	31	59	49	202	21	13	24	26	84	16	13	29	19	77
1884	46	68	56	46	216	28	22	42	38	130	14	27	24	25	90
1885	32	30	46	38	146	38	47	44	43	172	35	34	39	27	135
1886	49	57	59	56	221	24	25	36	35	120	26	16	21	28	91
1887	35	36	50	49	170	41	24	44	39	148	23	27	45	18	113
1888	63	54	44	58	219	35	27	31	40	133	27	27	29	36	119
1889	52	56	65	54	227	54	29	59	68	210	39	23	35	33	130
Total	630	630	717	696	2,673	452	401	541	545	1,939	314	293	413	362	1,382
Total by color	1,260		1,413		.....	853		1,086		.....	607		775		.....
Total by sex	1,347		1,326		.....	993		946		.....	727		655		.....

Year.	October.					November.					December.				
	White.		Colored.		Total.	White.		Colored.		Total.	White.		Colored.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.	
1876	7	5	14	13	39	4	7	7	14	32	8	3	20	10	41
1877	14	9	30	26	78	12	6	16	19	53	11	10	24	27	72
1878	14	15	22	17	68	15	10	18	22	65	9	6	25	24	64
1879	11	14	25	18	68	13	5	32	18	68	19	10	24	16	69
1880	12	4	25	22	63	16	9	19	21	65	14	11	27	21	73
1881	20	8	28	24	80	15	5	19	23	62	16	9	20	27	72
1882	22	17	32	14	85	17	16	30	20	83	13	13	20	20	66
1883	24	23	24	26	97	11	12	25	19	67	9	14	23	17	63
1884	16	18	19	12	58	13	14	20	19	66	20	9	24	33	86
1885	15	20	30	21	86	19	14	21	19	73	22	11	25	21	79
1886	13	8	19	21	61	14	15	23	20	72	13	10	20	16	59
1887	27	23	35	26	111	13	11	25	22	71	23	7	21	14	65
1888	25	8	28	24	85	11	11	17	21	60	24	13	21	22	80
1889	17	26	27	30	100	23	15	13	23	74	12	22	32	27	93
Total	237	191	358	293	1,079	196	150	285	280	911	213	148	326	295	982
Total by color	428		651		.....	346		565		.....	361		621		.....
Total by sex	595		484		.....	481		430		.....	539		443		.....

TABLE XXII.—*Deaths of children under one year of age, by months, sex, and color, etc.*—Cont'd.

Year.	January.					February.					March.				
	White.		Colored.		Total.	White.		Colored.		Total.	White.		Colored.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.	
1876	6	8	15	13	42	12	6	17	20	55	11	10	25	12	58
1877	20	18	24	18	80	19	18	28	32	97	25	17	34	19	95
1878	13	12	30	24	79	18	7	20	12	57	23	16	22	15	76
1879	22	10	29	24	85	13	12	23	28	76	27	15	33	23	98
1880	16	19	16	20	71	21	22	26	22	91	13	13	35	26	87
1881	11	18	15	20	64	20	12	19	34	85	14	15	25	26	80
1882	7	11	25	21	64	11	7	23	32	73	16	14	36	24	90
1883	22	7	23	29	81	15	3	26	23	67	9	19	26	21	75
1884	18	16	31	29	94	19	9	18	25	71	17	11	24	25	77
1885	19	10	27	18	74	21	11	30	31	93	25	15	30	20	90
1886	24	17	16	29	86	25	15	29	17	86	13	19	25	21	78
1887	16	15	24	20	75	9	4	21	14	48	24	15	26	24	89
1888	17	12	33	28	90	18	11	29	24	82	20	29	42	25	116
1889	27	12	34	29	102	13	15	29	22	79	26	20	32	21	99
Total	238	185	342	322	1,087	234	152	338	336	1,060	263	228	415	302	1,208
Total by color	423		664		.....	386		674		.....	491		717		.....
Total by sex	580		507		.....	572		488		.....	678		530		.....

Year.	April.					May.					June.					Grand totals by years.
	White.		Colored.		Total.	White.		Colored.		Total.	White.		Colored.		Total.	
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.		
1876	7	5	21	10	43	12	10	12	17	51	58	44	52	45	199	1,041
1877	9	18	25	15	67	11	13	24	20	68	42	32	46	41	161	1,133
1878	10	13	32	26	81	38	30	45	42	155	49	28	65	41	183	1,165
1879	24	15	20	20	79	15	15	21	16	67	52	55	55	48	210	1,206
1880	13	15	33	23	84	29	22	32	31	114	47	48	60	67	222	1,305
1881	14	14	26	21	75	14	6	24	12	56	39	18	32	26	115	1,041
1882	8	14	17	18	57	14	6	33	15	68	39	32	38	54	163	1,237
1883	11	14	28	20	73	18	16	20	12	66	30	24	39	34	127	1,079
1884	15	10	21	18	64	17	7	24	17	65	45	50	50	43	188	1,205
1885	18	15	40	17	90	9	13	23	23	68	45	38	63	49	195	1,301
1886	18	15	39	19	91	14	6	25	25	70	35	25	32	33	125	1,160
1887	14	13	26	22	75	14	13	25	24	76	64	50	57	68	239	1,280
1888	22	15	23	27	87	18	13	29	22	82	40	60	48	54	202	1,355
1889	19	13	28	24	84	12	11	17	26	66	60	38	54	52	204	1,468
Total	202	189	379	280	1,050	235	181	354	302	1,072	645	542	691	655	2,533	16,976
Total by color	391		659		.....	416		656		.....	1,187		1,346		.....	7,149 W. 9,827 C.
Total by sex	581		469		.....	589		483		.....	1,336		1,197		.....	9,018 M. 7,958 F.

TABLE XXIII.—*Deaths of children under five years of age in the District of Columbia during ten years.*

Year.	January.			February.			March.			April.			May.			June.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1880																		
1881	47	59	106	49	87	136	51	98	149	50	87	137	45	52	97	71	77	148
1882	54	77	131	62	96	158	73	84	157	48	51	99	65	68	133	102	110	212
1883	52	75	127	39	74	113	82	89	171	48	84	132	58	55	113	80	89	169
1884	74	106	180	68	97	165	59	81	140	62	65	127	46	69	115	123	123	246
1885	56	80	136	58	104	162	69	88	157	49	104	153	42	83	125	112	144	256
1886	61	70	131	57	75	132	46	85	131	37	89	126	30	66	96	80	88	168
1887	46	62	108	23	61	84	58	79	137	52	72	124	38	68	106	135	153	288
1888	49	96	145	67	88	155	95	105	200	61	77	138	54	74	128	129	117	246
1889	66	103	169	38	81	119	66	90	156	53	77	130	37	58	95	125	123	248
Total	505	728	1, 233	461	763	1, 224	599	799	1, 398	460	706	1, 166	415	593	1, 008	957	1, 024	1, 981
Mean	56. 1	80. 9	137. 0	51. 2	84. 8	136. 0	66. 5	88. 8	155. 3	51. 1	78. 4	129. 5	46. 1	65. 9	112. 0	106. 3	113. 9	220. 1

Year.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1880	86	120	206	69	95	164	56	95	151	67	79	146	52	65	117	53	68	121
1881	114	145	259	95	125	220	86	101	187	71	86	157	56	89	145	40	67	107
1882	108	133	241	50	91	141	40	85	125	71	68	139	45	72	117	49	57	106
1883	149	140	289	75	117	192	70	88	158	39	71	110	46	85	131	79	118	197
1884	72	113	185	114	118	232	94	103	197	52	71	123	50	58	108	53	73	126
1885	131	158	289	66	100	166	67	72	139	35	66	101	39	76	115	41	61	102
1886	85	113	198	83	118	201	77	98	175	65	96	161	41	71	112	42	56	98
1887	137	118	255	83	92	175	79	86	165	51	61	112	37	56	93	57	70	127
1888	141	145	286	123	171	294	86	106	192	59	91	150	57	56	113	48	91	139
1889																		
Total	1, 023	1, 185	2, 208	758	1, 027	1, 785	655	834	1, 489	510	689	1, 199	423	628	1, 051	462	661	1, 123
Mean	113. 7	131. 6	245. 3	84. 2	114. 1	198. 3	72. 9	92. 7	165. 5	56. 7	76. 5	133. 2	47. 0	69. 8	116. 8	51. 3	73. 4	1, 247

TABLE XXIV.—*Percentage of deaths of those under one year old to total deaths of all ages; also to total births and to total deaths of those under five years of age, and total deaths per* 1,000 *inhabitants of children under one year of age for fourteen years, from July* 1, 1875, *to June* 30, 1889.

Year.	Total deaths of those under one year old.	Total deaths of all ages.	Percentage of deaths of those under one year old to total deaths of all ages.	Total births (reported) not including still-births.	Percentage of deaths of those under one year old to total births not including still-births.	Total deaths of those under five years old.	Percentage of deaths of those under one year old to total deaths of those under five years old.	Total deaths per 1,000 inhabitants of those under one year of age.
1876	1, 041	4, 160	25. 00	4, 289	24. 27	1, 563	66. 60	6. 60
1877	1, 133	4, 208	26. 92	3, 811	29. 73	1, 856	61. 04	6. 97
1878	1, 165	4, 231	27. 53	3, 912	29. 78	1, 806	64. 50	6 96
1879	1, 206	4, 309	27. 98	3, 816	31. 60	2, 020	59. 70	6. 99
1880	1, 305	4, 207	33. 39	4, 095	31. 86	1, 958	71. 75	7. 35
1881	1. 041	4, 136	25. 17	3, 595	28. 96	1, 678	62. 04	5. 68
1882	1, 237	4, 571	27. 06	3, 391	36. 48	1, 873	66. 00	6. 55
1883	1, 079	4, 286	25. 18	3, 116	34. 95	1, 669	65. 25	5. 67
1884	1, 205	4, 814	25. 03	3, 224	37. 38	2, 034	59. 24	6. 03
1885	1, 301	4, 998	26. 03	3, 334	39. 05	1, 957	66. 48	6. 55
1886	1, 160	4, 674	25. 24	3, 516	33. 56	1, 703	69. 29	5. 66
1887	1, 280	4, 665	27. 43	3, 728	34. 33	1, 791	71. 47	6. 09
1888	1, 355	5, 040	26. 80	3, 670	36. 91	1, 935	70. 00	6. 00
1889	1, 468	5, 152	28. 49	4, 001	36. 69	2, 089.	70. 27	5. 87
Total	16, 976	63, 451		51, 498		25, 932		
Mean			26. 75		33. 00		65. 5	6. 36

TABLE XXV.—*Deaths of persons over sixty years of age—less those by violence.*

Years	January.			February.			March.			April.			May.			June.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1880	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1881	...	...	78	...	...	57	...	...	68	...	...	74	...	...	66	...	...	47
1882	54	21	77	37	36	73	53	17	70	43	32	75	38	25	63	30	24	54
1883	45	23	68	42	21	63	56	30	86	57	17	74	51	17	68	36	20	56
1884	50	24	74	53	22	75	64	25	89	53	30	83	32	20	52	34	17	51
1885	51	26	77	68	31	99	72	36	108	48	31	79	34	32	66	53	28	81
1886	50	17	67	51	43	94	68	30	98	56	26	82	42	28	70	39	21	60
1887	57	21	78	43	26	69	54	17	71	47	31	78	33	25	58	40	22	62
1888	68	30	98	66	22	88	72	29	101	52	19	71	56	22	78	39	27	66
1889	57	30	87	51	21	72	69	26	95	68	34	102	45	26	71	47	20	67
Total	434	192	704	411	222	690	508	210	786	424	220	718	331	195	586	318	179	484
Mean	54. 2	24. 0	88. 0	51. 4	27. 7	86. 2	63. 5	26. 2	98. 2	53. 0	27. 5	89. 7	41. 3	24. 4	73. 2	39. 7	22. 3	60. 5

Years.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1880	...	...	47	...	...	38	...	...	60	...	...	62	...	...	43	...	...	66
1881	43	20	63	38	26	64	26	18	44	52	21	73	44	21	65	49	22	71
1882	34	21	55	31	22	53	36	25	51	31	29	60	29	17	46	37	21	58
1883	51	19	70	38	28	66	33	16	49	32	16	48	49	17	66	64	24	88
1884	41	31	72	29	25	54	32	16	48	46	17	63	46	26	72	39	31	70
1885	61	31	92	48	23	71	38	28	66	38	17	55	35	26	61	38	21	59
1886	49	31	80	42	27	69	64	25	89	44	17	61	47	26	73	47	25	72
1887	59	30	89	40	26	66	48	32	80	58	18	76	45	30	75	49	22	71
1888	52	24	76	43	22	65	33	16	49	39	21	60	37	22	59	59	22	81
1889	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	390	207	644	309	199	546	300	176	536	340	156	558	332	185	560	382	188	636
Mean	48. 8	25. 9	80. 5	38. 6	24. 9	68. 2	37. 5	22. 0	67. 0	42. 5	19. 5	69. 7	41. 5	23. 1	70. 0	47. 7	23. 5	79. 5

TABLE XXVI.—*Deaths from diarrhœal diseases during Twelve Years from January* 1, 1877, *to December* 31, 1888, *inclusive.*

Months.	Year.																	
	1877.			1878.			1879.			1880.			1881.			1882.		
	Color.			Color.			Color.			Color.			Color.			Color.		
	W.	C.	T.	W.	C.	T	W.	C.	T	W.	C.	T.	W.	C.	T.	W.	C.	T.
January	2	3	5	6	0	6	6	1	7	3	2	5	3	2	5	2	4	6
February	1	2	3	1	1	2	4	2	6	3	4	7	4	3	7	4	2	6
March	6	3	9	6	2	8	0	2	2	4	0	4	3	0	3	6	1	7
April	0	0	0	3	3	6	3	2	5	4	2	6	5	2	7	4	4	8
May	3	1	4	32	19	51	7	2	9	15	18	33	5	5	10	5	3	8
June	46	32	75	46	47	93	78	51	129	54	57	111	39	28	67	46	43	89
July	59	83	142	33	76	109	72	73	145	33	42	75	72	70	142	64	80	144
August	39	53	92	30	52	82	31	35	66	11	26	37	51	63	114	29	40	69
September	16	16	32	7	15	22	17	30	47	11	17	28	40	32	72	5	26	31
October	9	11	20	12	8	20	7	16	23	7	9	16	17	20	37	7	9	16
November	4	5	9	3	1	4	2	6	8	4	4	8	12	10	22	6	7	13
December	3	3	6	3	2	5	2	2	4	3	2	5	1	2	3	2	3	5
Totals by color...	188	212	400	182	226	408	229	222	451	152	183	335	252	237	489	180	222	402
Monthly averages.	15. 7	17. 6	33. 3	15. 2	18. 8	34. 0	19. 1	18. 5	37. 6	12. 6	15. 3	27. 9	21. 0	19. 7	40. 7	15. 0	18. 5	33. 5

TABLE XXVI.—*Deaths from diarrhœal diseases during Twelve Years, etc.*—Continued.

Months.	Year.																	
	1883.			1884.			1885.			1886.			1887.			1888.		
	Color.			Color.			Color.			Color.			Color.			Color.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
January	0	1	1	1	0	1	3	2	5	2	0	2	2	0	2	4	0	4
February	2	0	2	1	2	3	1	2	3	3	1	4	2	3	5	3	2	5
March	1	3	4	3	5	8	2	4	6	3	0	3	3	0	3	3	2	5
April	2	3	5	3	1	4	0	4	4	0	2	2	2	5	7	5	2	7
May	5	3	8	1	7	8	3	2	5	3	1	4	0	9	9	1	4	5
June	34	25	59	49	50	99	57	43	100	31	20	51	68	69	137	41	49	90
July	69	61	130	40	46	86	71	71	142	46	36	82	68	63	131	76	65	141
August	39	40	79	48	37	85	27	31	58	35	43	78	28	35	63	56	71	127
September	9	23	32	35	31	66	19	14	33	19	15	34	18	15	33	25	32	57
October	4	5	9	8	12	20	12	6	18	6	10	16	9	9	18	8	12	20
November	5	6	11	5	7	12	2	4	6	11	4	15	0	1	1	8	1	9
December	3	1	4	4	3	7	0	2	2	2	3	5	7	2	9	2	2	4
Totals by color	173	171	344	198	201	399	197	185	382	161	135	296	207	211	418	232	242	474
Monthly averages.	14.4	14.2	28.6	16.5	16.7	33.2	16.4	15.4	31.8	13.4	11.2	24.6	17.2	17.6	34.8	19.3	20.2	39.5

TABLE XXVII.—*Showing deaths from consumption by sex, color, and months for Thirteen Years ending December* 31, 1888.

Year.	January.				February.				March.				April.				May.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1876	28	13	6	11	18	14	19	18	17	14	6	12	17	9	16	18	8	14	9	13
1877	13	10	6	15	15	19	5	18	12	14	13	10	13	15	12	12	24	10	10	10
1878	14	33	20	24	13	19	13	13	18	18	19	15	14	18	20	16	7	14	10	17
1879	26	12	6	17	15	14	13	16	15	17	21	16	12	18	17	16	9	10	20	13
1880	18	11	18	21	22	18	16	28	14	15	30	19	16	18	14	19	11	22	15	25
1881	21	22	14	12	14	15	16	25	17	16	18	26	17	11	22	35	22	13	18	17
1882	15	11	14	26	20	11	20	16	24	25	15	20	15	18	13	23	15	17	18	17
1883	19	17	13	23	10	16	15	24	28	23	17	26	13	17	15	20	16	12	14	20
1884	22	28	12	30	16	14	27	23	16	16	16	16	14	24	8	27	24	8	22	23
1885	14	13	24	18	23	20	12	23	16	16	24	14	18	24	21	21	20	12	14	35
1886	19	14	13	23	13	15	13	21	17	21	21	20	14	12	22	20	16	12	14	24
1887	16	18	15	18	23	10	13	18	21	19	12	24	13	16	17	21	5	10	9	18
1888	13	18	8	13	20	18	14	17	21	19	5	30	14	13	13	33	9	11	9	21
Totals by sex and color	238	210	169	251	222	203	196	260	236	233	217	248	190	213	210	281	186	165	182	253
Totals by color	448		420		425		456		469		465		403		491		351		435	
Grand total	868				881				934				894				786			

TABLE XXVII.—*Deaths from consumption by sex, color, etc.*—Continued.

Year.	June.				July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1876	19	9	12	11	10	15	15	14	5	7	7	19	11	11	10	9
1877	11	8	15	20	7	12	10	20	10	10	9	17	16	9	7	12
1878	11	10	11	21	9	14	9	25	16	18	16	18	13	13	10	23
1879	15	13	15	26	11	13	13	20	11	10	10	19	14	9	12	19
1880	10	10	14	23	10	12	7	14	15	16	8	17	12	12	13	16
1881	14	11	16	14	6	14	17	28	15	9	13	19	13	9	15	29
1883	14	10	12	24	9	11	9	18	9	11	12	9	11	13	15	18
1883	10	9	13	16	14	18	13	13	9	14	11	23	18	12	16	19
1884	13	16	16	22	19	20	14	16	17	16	14	9	14	13	10	18
1885	9	11	10	24	14	20	18	22	11	15	11	23	16	15	14	20
1886	14	11	26	25	13	14	18	18	12	12	15	14	19	12	14	13
1887	9	12	16	13	9	13	12	21	8	14	7	14	14	20	12	22
1888	5	15	13	11	10	9	17	6	15	5	10	23	14	7	15	25
Totals by sex and color	154	145	189	250	141	185	167	235	153	157	143	224	185	155	163	243
Totals by color	299		439		326		402		10		367		340		406	
Grand total	738				728				677				746			

Year.	October.				November.				December.				Total.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M.	F.	M.	F.
1876	14	14	12	13	17	13	9	21	14	13	7	13	178	146	128	172
1877	14	17	8	24	12	13	13	9	18	17	13	14	165	154	121	181
1878	9	18	7	10	14	23	8	10	18	13	15	15	156	201	158	207
1879	9	13	4	13	14	9	16	16	16	20	11	17	167	158	158	208
1880	18	14	14	21	17	11	9	18	17	20	8	14	180	179	166	235
1881	17	18	15	17	22	18	13	14	17	20	15	18	195	176	192	254
1882	14	14	15	13	12	16	15	16	9	11	21	23	167	168	179	223
1883	14	7	18	9	14	19	14	25	21	12	10	23	186	176	169	241
1884	13	10	15	14	18	14	16	8	14	13	18	19	200	192	188	225
1885	14	15	12	19	12	7	17	14	20	17	10	20	187	185	187	253
1886	20	11	15	19	16	17	18	20	22	18	10	15	195	169	194	232
1887	18	14	15	9	13	19	16	16	20	12	5	16	169	177	149	210
1888	15	21	17	7	11	12	10	15	9	15	14	23	156	163	145	224
Totals by sex and color	189	186	167	188	192	191	174	202	215	201	157	230	2,301	2,244	2,134	2,865
Totals by color	375		355		383		376		416		387		4,545		4,999	
Grand total	730				759				803				9,544			

TABLE XXVI.—*Deaths from diarrhœal diseases during Twelve Years, etc.*—Continued.

Months.	Year.																	
	1883.			1884.			1885.			1886.			1887.			1888.		
	Color.			Color.			Color.			Color.			Color.			Color.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
January	0	1	1	1	0	1	3	2	5	2	0	2	2	0	2	4	0	4
February	2	0	2	1	2	3	1	2	3	3	1	4	2	3	5	3	2	5
March	1	3	4	3	5	8	2	4	6	3	0	3	3	0	3	3	2	5
April	2	3	5	3	1	4	0	4	4	0	2	2	2	5	7	5	2	7
May	5	3	8	1	7	8	3	2	5	3	1	4	0	9	9	1	4	5
June	34	25	59	49	50	99	57	43	100	31	20	51	68	69	137	41	49	90
July	69	61	130	40	46	86	71	71	142	46	36	82	68	63	131	76	65	141
August	39	40	79	48	37	85	27	31	58	35	43	78	28	35	63	56	71	127
September	9	23	32	35	31	66	19	14	33	19	15	34	18	15	33	25	32	57
October	4	5	9	8	12	20	12	6	18	6	10	16	9	9	18	8	12	20
November	5	6	11	5	7	12	2	4	6	11	4	15	0	1	1	8	1	9
December	3	1	4	4	3	7	0	2	2	2	3	5	7	2	9	2	2	4
Totals by color	173	171	344	198	201	399	197	185	382	161	135	296	207	211	418	232	242	474
Monthly averages	14. 4	14. 2	28. 6	16. 5	16. 7	33. 2	16. 4	15. 4	31. 8	13. 4	11. 2	24. 6	17. 2	17. 6	34. 8	19. 3	20. 2	39. 5

TABLE XXVII.—*Showing deaths from consumption by sex, color, and months for Thirteen Years ending December* 31, 1888.

Year.	January.				February.				March.				April.				May.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1876	28	13	6	11	18	14	19	18	17	14	6	12	17	9	16	18	8	14	9	13
1877	13	10	6	15	15	19	5	18	12	14	13	10	13	15	12	12	24	10	10	10
1878	14	33	20	24	13	19	13	13	18	18	19	15	14	18	20	16	7	14	10	17
1879	26	12	6	17	15	14	13	16	15	17	21	16	12	18	17	16	9	10	20	13
1880	18	11	18	21	22	18	16	28	14	15	30	19	16	18	14	19	11	22	15	25
1881	21	22	14	12	14	15	16	25	17	16	18	26	17	11	22	35	22	13	18	17
1882	15	11	14	26	20	11	20	16	24	25	15	20	15	18	13	23	15	17	18	17
1883	19	17	13	23	10	16	15	24	28	23	17	26	13	17	15	20	16	12	14	20
1884	22	28	12	30	16	14	27	23	16	16	16	16	14	24	8	27	24	8	22	23
1885	14	13	24	18	23	20	12	23	16	16	24	14	18	24	21	21	20	12	14	35
1886	19	14	13	23	13	15	13	21	17	21	21	20	14	12	22	20	16	12	14	24
1887	16	18	15	18	23	10	13	18	21	19	12	24	13	16	17	21	5	10	9	18
1888	13	18	8	13	20	18	14	17	21	19	5	30	14	13	13	33	9	11	9	21
Totals by sex and color	238	210	169	251	222	203	196	260	236	233	217	248	190	213	210	281	186	165	182	253
Totals by color	448		420		425		456		469		465		403		491		351		435	
Grand total	868				881				934				894				786			

TABLE XXVII.—*Deaths from consumption by sex, color, etc.*—Continued.

Year.	June.				July.				August.				September.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1876	19	9	12	11	10	15	15	14	5	7	7	19	11	11	10	9
1877	11	8	15	20	7	12	10	20	10	10	9	17	16	9	7	12
1878	11	10	11	21	9	14	9	25	16	18	16	18	13	13	10	23
1879	15	13	15	26	11	13	13	20	11	10	10	19	14	9	12	19
1880	10	10	14	23	10	12	7	14	15	16	8	17	12	12	13	16
1881	14	11	16	14	6	14	17	28	15	9	13	19	13	9	15	29
1882	14	10	12	24	9	11	9	18	9	11	12	9	11	13	15	18
1883	10	9	13	16	14	18	13	13	9	14	11	23	18	12	16	19
1884	13	16	16	22	19	20	14	16	17	16	14	9	14	13	10	18
1885	9	11	10	24	14	20	18	22	11	15	11	23	16	15	14	20
1886	14	11	26	25	13	14	18	18	12	12	15	14	19	12	14	13
1887	9	12	16	13	9	13	12	21	8	14	7	14	14	20	12	22
1888	5	15	13	11	10	9	17	6	15	5	10	23	14	7	15	25
Totals by sex and color	154	145	189	250	141	185	167	235	153	157	143	224	185	155	163	243
Totals by color	299		439		326		402		10		367		340		406	
Grand total	738				728				677				746			

Year.	October.				November.				December.				Total.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1876	14	14	12	13	17	13	9	21	14	13	7	13	178	146	128	172
1877	14	17	8	24	12	13	13	9	18	17	13	14	165	154	121	181
1878	9	18	7	10	14	23	8	10	18	13	15	15	156	201	158	207
1879	9	13	4	13	14	9	16	16	16	20	11	17	167	158	158	208
1880	18	14	14	21	17	11	9	18	17	20	8	14	180	179	166	235
1881	17	18	15	17	22	18	13	14	17	20	15	18	195	176	192	254
1882	14	14	15	13	12	16	15	16	9	11	21	23	167	168	179	223
1883	14	7	18	9	14	19	14	25	21	12	10	23	186	176	169	241
1884	13	10	15	14	18	14	16	8	14	13	18	19	200	192	188	225
1885	14	15	12	19	12	7	17	14	20	17	10	20	187	185	187	253
1886	20	11	15	19	16	17	18	20	22	18	10	15	195	169	194	232
1887	18	14	15	9	13	19	16	16	20	12	5	16	169	177	149	210
1888	15	21	17	7	11	12	10	15	9	15	14	23	156	163	145	224
Totals by sex and color	189	186	167	188	192	191	174	202	215	201	157	230	2,301	2,244	2,134	2,865
Totals by color	375		355		383		376		416		387		4,545		4,999	
Grand total	730				759				803				9,544			

TABLE XXVIII.—*Total deaths from eighteen different diseases and suicides during Fourteen Years from July 1, 1875, to June 30, 1889, inclusive, arranged by sex, color, and years.*

Diseases.	1876.					1877.					1878.					1879.				
	W.		C.			W.		C.			W.		C.			W.		C.		
	M.	F.	M.	F.	Total.	M.	F.	M.	F.	Total.	M.	F.	M.	F.	Total.	M.	F.	M.	F.	Total.
Consumption	171	135	108	165	579	159	149	121	174	603	154	180	153	202	689	171	183	157	205	716
Typhoid fever	29	33	22	14	98	24	30	11	17	82	38	29	20	14	101	27	18	19	10	74
Apoplexy	30	32	22	20	104	40	34	12	24	110	33	24	10	22	89	24	21	15	16	76
Insanity	3	2	3	0	8	10	5	5	3	23	4	0	1	1	6	7	2	3	0	12
Softening of the brain	10	2	4	1	17	15	4	2	1	22	9	11	1	0	21	8	7	1	5	21
Paralysis, hemiplegia, and paraplegia	5	6	4	5	20	9	5	6	7	27	17	19	10	7	53	22	12	7	9	50
Cancers	8	30	4	13	55	12	38	3	14	67	19	32	4	12	67	12	48	3	23	86
Epilepsy	8	4	5	4	21	7	5	1	3	16	2	3	0	2	7	4	2	1	1	8
Diseases of the heart	49	36	27	40	152	48	43	33	19	143	38	45	23	31	137	49	30	21	25	125
Bright's disease	14	7	7	5	33	17	5	2	1	25	18	5	6	7	36	5	4	7	5	21
Rheumatism	5	2	1	2	10	2	6	4	3	15	3	0	2	0	5	0	4	3	4	11
Aneurisms	3	1	4	1	9	0	0	2	0	2	5	0	1	1	7	6	0	2	0	8
Angina pectoris	1	2	1	0	4	6	1	0	2	9	7	2	0	2	11	4	0	2	0	6
Gastritis	12	16	7	3	38	10	4	3	3	20	6	8	5	2	21	8	4	3	5	20
Cirrhosis of the liver	8	2	1	0	11	8	2	0	2	12	1	2	1	0	4	2	2	1	0	5
Dropsies, including hydrocephalus	13	12	22	13	60	10	17	10	8	45	18	19	29	27	93	23	24	31	27	105
Diabetes	0	0	0	1	1	1	1	1	1	4	4	0	0	0	4	5	1	1	1	8
Hernia	4	1	3	1	9	1	1	2	0	4	2	1	1	0	4	0	5	2	0	7
Suicides	3	2	0	0	5	3	2	0	0	5	6	0	0	0	6	4	3	0	0	7

Diseases.	1880.					1881.					1882.					1883.				
	W.		C.			W.		C.			W.		C.			W.		C.		
	M.	F.	M.	F.	Total.	M.	F.	M.	F.	Total.	M.	F.	M.	F.	Total.	M.	F.	M	F.	Total.
Consumption	166	168	173	239	746	194	173	163	229	759	193	180	180	251	804	160	170	174	226	730
Typhoid fever	20	23	19	22	84	24	20	13	10	67	37	37	23	23	120	18	31	26	17	92
Apoplexy	30	15	10	16	71	40	23	19	17	99	31	23	10	19	83	26	31	11	16	84
Insanity	9	5	1	2	17	26	7	3	2	38	28	4	4	7	43	31	8	6	6	51
Softening of the brain	4	1	3	3	11	8	1	3	3	15	6	5	4	2	17	6	3	0	3	12
Paralysis, hemiplegia, and paraplegia	28	23	10	21	82	28	17	9	14	68	18	16	12	19	65	16	18	5	6	45
Cancers	21	29	5	16	71	17	47	1	22	87	21	34	8	17	80	17	36	7	19	79
Epilepsy	3	0	2	4	9	5	2	4	1	12	6	3	7	5	21	7	1	4	1	13
Diseases of the heart	43	33	23	28	127	43	38	36	33	150	74	44	28	39	185	78	58	33	36	205
Bright's disease	17	9	4	5	35	12	10	9	6	37	21	15	10	11	57	12	9	7	5	33
Rheumatism	5	2	4	2	13	10	7	3	4	24	4	9	0	6	19	9	15	7	7	38
Aneurisms	5	0	5	3	13	5	1	5	0	11	3	2	2	0	7	6	0	2	2	10
Angina pectoris	2	3	2	3	10	5	3	0	0	8	5	2	1	1	9	5	4	0	2	11
Gastritis	9	6	3	7	25	12	11	2	2	27	7	6	2	7	22	16	6	0	7	29
Cirrhosis of the liver	8	2	0	2	10	11	1	2	0	14	4	4	1	0	9	6	3	1	0	10
Dropsies, including hydrocephalus	11	17	22	10	60	7	12	11	12	42	5	2	13	17	37	10	7	14	11	42
Diabetes	3	1	0	0	4	3	1	0	0	4	0	1	0	0	1	5	0	0	1	6
Hernia	3	4	0	0	7	3	3	1	0	7	0	2	3	0	5	3	2	0	1	6
Suicides	16	3	2	0	21	7	4	0	0	11	10	3	1	1	15	16	3	1	1	21

TABLE XXVIII.—*Deaths from eighteen different diseases and suicides, etc.*—Continued.

Diseases.	1884.					1885.					1886.				
	W.		C.		Total.	W.		C.		Total.	W.		C.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.	
Consumption	195	188	183	253	819	195	182	192	219	788	180	174	191	251	796
Typhoid fever	32	21	13	10	76	48	35	14	27	124	46	35	24	23	128
Apoplexy	44	36	16	18	114	43	24	24	10	101	40	34	22	29	125
Insanity	32	6	12	6	56	56	13	17	7	93	68	16	11	6	101
Softening of the brain	8	5	0	2	15	7	5	2	1	15	9	5	1	2	17
Paralysis, hemiplegia, and paraplegia	21	23	3	11	58	20	27	9	17	73	19	17	13	15	64
Cancers	22	44	4	20	90	25	61	10	23	119	27	53	4	19	103
Epilepsy	2	0	3	0	5	3	1	1	3	8	4	2	1	2	9
Diseases of the heart	78	51	33	60	222	65	78	40	52	235	72	48	41	74	235
Bright's disease	22	11	10	6	49	25	9	10	9	53	19	13	13	8	53
Rheumatism	15	9	6	6	36	11	10	7	6	34	21	6	4	3	34
Aneurisms	5	4	2	2	13	2	1	8	0	11	8	0	2	2	12
Angina pectoris	3	5	1	0	9	4	2	1	0	7	4	1	1	1	7
Gastritis	11	8	8	3	30	13	10	4	4	31	11	16	5	5	37
Cirrhosis of the liver	2	2	0	2	6	9	5	1	0	15	9	5	2	1	17
Dropsies, including hydrocephalus	4	12	12	11	39	10	8	8	11	37	9	5	11	13	38
Diabetes	3	1	0	0	4	6	3	1	0	10	5	6	1	0	12
Hernia	3	3	2	0	8	1	0	4	0	5	4	2	2	0	8
Suicides	10	1	1	0	12	11	2	0	0	13	13	1	2	1	17

Diseases.	1887.					1888.					1889.				
	W.		C.		Total.	W.		C.		Total.	W.		C.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.	
Consumption	189	169	167	211	736	164	186	129	223	702	157	148	188	204	697
Typhoid fever	32	40	24	20	116	47	48	37	36	168	53	43	41	33	170
Apoplexy	46	32	17	20	115	66	30	19	23	138	46	22	22	26	116
Insanity	52	13	18	9	92	77	16	13	11	117	72	18	10	10	110
Softening of the brain	8	5	2	1	16	4	5	1	0	10	9	6	4	1	20
Paralysis, hemiplegia, and paraplegia	12	10	14	10	46	16	18	17	12	63	20	22	14	20	76
Cancers	25	55	8	26	114	27	47	4	22	100	26	73	2	18	119
Epilepsy	2	2	2	2	8	6	6	4	2	18	0	3	4	1	8
Diseases of the heart	66	77	45	53	241	81	68	58	66	273	93	64	49	64	270
Bright's disease	19	14	7	9	49	18	17	10	15	60	20	6	8	5	39
Rheumatism	13	13	3	7	36	17	18	5	13	53	14	11	6	3	34
Aneurisms	3	1	1	0	5	5	2	4	2	13	3	2	3	2	10
Angina pectoris	3	1	1	0	5	1	2	0	2	5	2	1	1	2	6
Gastritis	14	10	5	5	34	18	15	2	6	41	14	16	4	9	43
Cirrhosis of the liver	10	3	1	1	15	9	4	2	1	16	9	0	2	1	12
Dropsies, including hydrocephalus	4	8	8	10	30	8	7	6	10	31	4	7	6	8	25
Diabetes	7	3	2	1	13	2	3	1	1	7	5	5	1	1	12
Hernia	2	1	2	1	6	2	1	1	0	4	3	0	6	0	9
Suicides	17	4	2	1	24	13	5	0	0	18	14	0	1	0	15

TABLE XXIX.—*Deaths from cancers, by color, sex, and nativity from September* 1, 1874, *to June* 30, 1889.

Cancers of—	Color.	Sex.	Nativity.							Total.
			District of Columbia.	Other parts of the United States.	Ireland.	England.	Germany.	France.	Italy.	Other countries and unknown.	
Breast	White	Female	23	78	20	4	4	...	....	2	131
	Colored	Male	1	2	....	..	....	....	....	....	3
		Female	10	45	....	..	....	....	....	....	55
Uterus	White	Female	40	140	22	11	13	2	1	6	235
	Colored	Female	23	92	..	....	....	....	....	....	115
Ovary	White	Female	5	8	2	...	2	..	....	....	17
	Colored	Female	1	4	....	....	....	....	....	....	5
Stomach	White	Male	10	37	14	4	22	...	1	3	91
		Female	14	32	11	5	8	1	..	2	73
	Colored	Male	3	25	....	..	....	....	....	....	28
		Female	9	36	....	....	....	....	....	....	45
Liver	White	Male	4	12	2	...	10	..	....	3	31
		Female	9	15	1	3	4	....	....	2	34
	Colored	Male	.....	6	...	..	..	....	....	....	6
		Female	.....	3	....	....	....	....	....	....	3
Face, head, neck, and mouth	White	Male	15	40	14	3	3	2	....	2	79
		Female	10	17	7	..	3	....	....	2	39
	Colored	Male	1	11	..	....	....	....	....	....	12
		Female	.....	8	....	..	....	....	..	1	9
All other organs	White	Male	12	49	8	4	13	1	....	2	89
		Female	28	66	9	3	11	1	1	2	121
	Colored	Male	3	17	....	....	....	....	....	....	20
		Female	5	39	....	..	..	....	....	.....	44
Total	White	Male	41	138	38	11	48	3	1	10	290
		Female	130	355	72	26	45	4	3	15	650
	Colored	Male	8	61	..	....	....	....	....	....	69
		Female	48	227	....	..	....	....	....	1	276
Total by sex	.....	Male	49	199	38	11	48	3	1	10	359
	.....	Female	178	582	72	26	45	4	3	16	926
Total by color	.....	White	171	493	110	37	93	7	4	25	940
	.....	Colored	56	288	..	....	....	....	....	1	345
Grand total	.....	.....	227	781	110	37	93	7	4	26	1,285

TABLE XXX.—*Deaths from cancers of white females, from September* 1, 1874, *to June* 30, 1889.

Cancer of—	Married.		Widows.		Single.		Total deaths from cancers.
	Deaths from cancers.	Percentage to total deaths from cancers of married.	Deaths from cancers.	Percentage to total deaths from cancers of widows.	Deaths from cancers.	Percentage to total deaths from cancers of single.	
Breast	51	15.94	52	23.42	28	26.18	131
Uterus	147	45.94	68	30.63	20	17.77	235
Ovary	11	3.44	5	2.26	1	.94	17
Stomach	25	7.82	34	15.31	14	13.04	73
Liver	15	4.68	12	5.42	7	6.54	34
Face, head, neck, mouth, tongue, and throat	15	4.68	18	8.10	6	5.61	39
All others	56	17.50	33	14.86	32	29.92	121
Total	320	100.00	222	100.00	108	100.00	650

TABLE XXXI.—*Deaths from cancers of colored females, from September 1, 1874, to June 30, 1889.*

Cancer of—	Married.		Widows.		Single.		Total deaths from cancers.
	Deaths from cancers.	Percentage to total deaths from cancers of married.	Deaths from cancers.	Percentage to total deaths from cancers of widows.	Deaths from cancers.	Percentage to total deaths from cancers of single.	
Breast	23	19.17	30	23.25	2	6.45	55
Uterus	53	44.16	52	40.30	10	29.03	115
Ovary	4	3.33	1	.78	.....	.....	5
Stomach	13	10.83	26	20.15	6	19.36	45
Liver	2	1.67	1	.78	.....	3.23	3
Face head, neck mouth, tongue, and throat	3	2.50	3	2.34	3	9.67	9
All others	22	18.34	16	12.40	6	32.26	44
Total	120	100.00	129	100.00	27	100.00	276

TABLE XXXII.—*Deaths from cancers, by age, color, and sex, with percentages, from September 1, 1874, to June 30, 1889.*

Age.	Color.	Sex.	Cancer of breast.	Cancer of uterus.	Cancer of ovary.	Cancer of stomach.	Cancer of liver.	Cancer of neck, head, face, mouth, and throat.	All others.	Total.
Under twenty years	White	Male	.....	.....	.....	.....	1	2	6	9
		Female	.....	1	.....	.....	.....	4	8	13
	Colored	Male	1	.....	.....	1	.....	1	2	5
		Female	.....	.....	.....	2	.....	1	2	5
Twenty to thirty years	White	Male	.....	.....	.....	1	.....	1	2	4
		Female	.....	4	2	3	.....	1	5	15
	Colored	Male	.....	.....	.....	2	1	1	4	8
		Female	2	5	1	2	.....	1	4	15
Thirty to forty years	White	Male	.....	.....	.....	2	4	2	4	12
		Female	7	36	2	3	3	.....	12	63
	Colored	Male	1	.....	.....	3	.....	.....	1	5
		Female	5	30	2	3	.....	.....	7	47
Forty to fifty years	White	Male	.....	.....	.....	14	6	14	12	46
		Female	33	74	3	9	11	4	20	154
	Colored	Male	.....	.....	.....	11	.....	4	1	16
		Female	8	22	.....	7	.....	1	14	52
Fifty to sixty years	White	Male	.....	.....	.....	31	13	17	20	81
		Female	37	58	4	17	4	6	30	156
	Colored	Male	.....	.....	.....	5	3	3	7	18
		Female	15	28	2	7	.....	2	5	59
Sixty to seventy years	White	Male	.....	.....	.....	21	4	19	27	71
		Female	31	40	5	24	7	7	30	144
	Colored	Male	.....	.....	.....	6	.....	2	2	10
		Female	13	14	.....	9	1	1	7	45
Seventy to eighty years	White	Male	.....	.....	.....	17	2	16	15	50
		Female	21	17	1	17	8	6	12	82
	Colored	Male	.....	.....	.....	1	2	.....	3	6
		Female	7	13	.....	10	1	1	4	36
Eighty years and over	White	Male	.....	.....	.....	5	1	8	4	18
		Female	2	5	.....	.....	1	11	.....	19
	Colored	Male	1	.....	.....	.....	.....	1	2	4
		Female	5	3	.....	4	1	2	2	17
Totals	White	Male	.....	.....	.....	91	31	79	90	291
		Female	131	235	17	73	34	39	117	646
	Colored	Male	3	.....	.....	29	6	12	22	72
		Female	55	115	5	44	3	9	45	276
Grand total	.....	.....	189	350	22	237	74	139	274	1,285
Percentage to total deaths from cancer.	.....	.....	14.71	27.24	1.72	18.44	5.76	10.90	21.23	100.00

TABLE XXXIII.—*Number of deaths from cancers, by color, sex, and age, total number of deaths from all causes, and number of deaths from all causes to 1 from cancer, from September 1, 1874, to June 30, 1889, inclusive.*

Cause of death.	White.			Colored.			Grand total.
	Male.	Female.	Total.	Male.	Female.	Total.	
Under twenty years:							
Deaths from cancers	9	13	22	5	5	10	32
Deaths from all causes	7,703	7,264	14,967	9,826	9,722	19,548	34,515
Number of deaths from all causes to 1 from cancer	856	559	.....	1,965	1,944	.....	.....
Twenty to thirty years:							
Deaths from cancers	4	15	19	8	15	23	42
Deaths from all causes	1,410	1,554	2,964	1,157	1,615	2,772	5,736
Number of deaths from all causes to 1 from cancer	352	103	.....	144	108	.....	.....
Thirty to forty years:							
Deaths from cancers	12	63	75	5	47	52	127
Deaths from all causes	1,671	1,530	3,201	1,034	1,260	2,294	5,495
Number of deaths from all causes to 1 from cancer	139	24	.....	207	27	.....	.....
Forty to fifty years:							
Deaths from cancers	45	158	203	13	52	65	268
Deaths from all causes	2,057	1,315	3,372	1,000	899	1,899	5,271
Number of deaths from all causes to 1 from cancer	45	8	.....	63	17	.....	.....
Fifty to sixty years:							
Deaths from cancers	81	156	237	18	59	77	314
Deaths from all causes	1,891	1,250	3,141	836	686	1,522	4,663
Number of deaths from all causes to 1 from cancer	22	8	.....	46	11	.....	.....
Sixty to seventy years:							
Deaths from cancers	71	144	215	10	45	55	270
Deaths from all causes	1,789	1,404	3,193	690	713	1,403	4,596
Number of deaths from all causes to 1 from cancer	25	9	.....	69	16	.....	.....
Seventy to eighty years:							
Deaths from cancers	50	82	132	6	36	42	174
Deaths from all causes	1,446	1,358	2,804	603	729	1,332	4,136
Number of deaths from all causes to 1 from cancer	29	16	.....	100	20	.....	.....
Eighty years and over:							
Deaths from cancers	18	19	37	4	17	21	58
Deaths from all causes	521	812	1,333	415	769	1,184	2,517
Number of deaths from all causes to 1 from cancer	29	43	.....	104	45	.....	.....
Total deaths from cancers	290	650	940	69	276	345	1,285
Total deaths from all causes	18,488	16,487	34,975	15,561	16,393	31,954	66,929
Number of deaths from all causes to 1 from cancer	63.5	25.5	37.3	216.0	59.4	91.8	52.0

TABLE XXXIV.—*Showing the number of still-births, including legitimates and illegitimates, with percentage of each to still-births, and of illegitimates to total illegitimates still-born, by color, for eleven years from 1879 to 1889, inclusive.*

Years.	Number of still-born.	Color.		Legitimate.		Illegitimate.		Percentage of legitimates to total still-births, by color.		Percentage of illegitimates to total still-births, by color.		Percentage of illegitimate still-born to total illegitimate still-born, by color.	
		White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.
1879	395	130	265	112	171	18	94	28.4	43.3	4.56	23.8	16.0	84.0
1880	358	119	239	105	159	14	80	29.3	44.4	3.90	22.3	14.9	85.1
1881	370	141	229	125	143	16	86	33.8	38.6	4.30	23.0	15.7	84.3
1882	351	140	211	124	146	16	65	35.3	41.5	4.66	18.6	19.7	80.3
1883	362	154	208	136	139	18	69	37.5	38.4	5.07	19.0	20.7	79.3
1884	351	132	219	123	141	9	78	35.0	40.2	2.57	22.2	10.3	89.7
1885	391	179	212	154	127	25	85	39.4	32.5	6.40	21.7	22.7	77.3
1886	406	164	242	149	138	15	104	40.4	34.0	3.70	25.6	12.6	87.4
1887	406	149	257	127	146	22	111	31.3	36.0	5.40	27.3	16.6	83.4
1888	458	182	276	156	155	26	121	34.1	33.0	5.68	26.4	17.7	82.3
1889	443	157	286	137	163	20	123	30.9	36.8	4.51	28.0	14.0	86.0
Totals	4,291	1,647	2,644	1,448	1,628	199	1,016	.....	.....	.....	.....	.....	.....
Means	.....	.....	.....	.....	.....	.....	.....	34.13	38.0	4.61	23.4	16.4	83.6

TABLE XXXV.—*Showing the number of legitimate and illegitimate births, with percentages of births to deaths, of still-births to births, of illegitimacy to births, and of illegitimacy to total illegitimacy, by color, for eleven years from 1879 to 1889, inclusive.*

Years.	Number of births.	Births, by color.		Legitimate.		Illegitimate.		Per cent. of births to deaths.	Per cent. of still-births to births.	Per cent. of illegitimacy to total births.
		White.	Col.	White.	Col.	White.	Col.			
1879	3,816	2,117	1,699	2,068	1,400	49	299	88.5	10.4	12.5
1880	4,095	2,297	1,798	2,241	1,456	56	342	97.3	8.8	12.0
1881	3,595	2,014	1,581	1,961	1,274	53	307	86.9	10.2	12.9
1882	3,391	1,800	1,591	1,747	1,277	53	314	74.2	10.4	12.3
1883	3,116	1,684	1,432	1,631	1,132	53	300	72.7	11.6	14.1
1884	3,224	1,747	1,477	1,684	1,196	63	281	66.9	10.9	13.4
1885	3,334	1,861	1,473	1,805	1,136	56	337	66.7	11.3	15.0
1886	3,516	1,981	1,535	1,916	1,184	65	351	75.2	11.5	15.2
1887	3,728	2,092	1,636	2,022	1,288	70	348	79.9	10.9	14.8
1888	3,670	2,035	1,635	1,964	1,262	71	373	72.8	12.5	16.1
1889	4,001	2,176	1,825	2,098	1,397	78	428	77.6	11.0	12.7
Totals	39,486	21,804	17,682	21,137	14,002	.....	.....	.....	.....	.....
Means	.....	.....	.....	.....	.....	667	3,680	78.0	10.9	13.7

Years.	Per cent. of legitimacy to total births, by color.		Per cent. of illegitimacy to total births, by color.		Per cent. of illegitimacy to total illegitimacy, by color.		Per cent. of white illegitimates to white births and of colored illegitimates to colored births.	
	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.
1879	54.2	36.7	1.31	7.83	14.0	86.0	2.32	17.60
1880	54.7	35.6	1.38	8.35	14.0	86.0	2.43	19.02
1881	54.6	35.4	1.47	8.54	14.8	85.2	2.63	19.42
1882	51.5	37.7	1.60	9.26	14.4	85.6	2.09	19.73
1883	52.4	36.3	1.74	9.63	15.0	85.0	3.14	20.95
1884	52.2	37.1	2.00	8.70	18.3	81.7	3.60	19.02
1885	54.1	34.7	1.68	10.18	14.3	85.7	3.00	22.88
1886	54.5	33.7	1.85	9.98	15.6	84.4	3.28	22.86
1887	54.3	34.5	1.83	9.33	16.7	83.7	3.34	21.27
1888	53.5	34.4	1.93	10.16	16.0	84.0	3.49	22.18
1889	52.4	34.9	1.95	10.70	15.4	84.6	3.59	23.45
Totals	53.5	35.5	1.70	9.33	15.3	84.7	3.00	20.76

TABLE XXXIII.—*Number of deaths from cancers, by color, sex, and age, total number of deaths from all causes, and number of deaths from all causes to 1 from cancer, from September 1, 1874, to June 30, 1889, inclusive.*

Cause of death.	White.			Colored.			Grand total.
	Male.	Female.	Total.	Male.	Female.	Total.	
Under twenty years:							
Deaths from cancers	9	13	22	5	5	10	32
Deaths from all causes	7,703	7,264	14,967	9,826	9,722	19,548	34,515
Number of deaths from all causes to 1 from cancer	856	559	.....	1,965	1,944	.....	.....
Twenty to thirty years:							
Deaths from cancers	4	15	19	8	15	23	42
Deaths from all causes	1,410	1,554	2,964	1,157	1,615	2,772	5,736
Number of deaths from all causes to 1 from cancer	352	103	.....	144	108	.....	.....
Thirty to forty years:							
Deaths from cancers	12	63	75	5	47	52	127
Deaths from all causes	1,671	1,530	3,201	1,034	1,260	2,294	5,495
Number of deaths from all causes to 1 from cancer	139	24	.....	207	27	.....	.....
Forty to fifty years:							
Deaths from cancers	45	158	203	13	52	65	268
Deaths from all causes	2,057	1,315	3,372	1,000	899	1,899	5,271
Number of deaths from all causes to 1 from cancer	45	8	.....	63	17	.....	.....
Fifty to sixty years:							
Deaths from cancers	81	156	237	18	59	77	314
Deaths from all causes	1,891	1,250	3,141	836	686	1,522	4,663
Number of deaths from all causes to 1 from cancer	22	8	.....	46	11	.....	.....
Sixty to seventy years:							
Deaths from cancers	71	144	215	10	45	55	270
Deaths from all causes	1,789	1,404	3,193	690	713	1,403	4,596
Number of deaths from all causes to 1 from cancer	25	9	.....	69	16	.....	.....
Seventy to eighty years:							
Deaths from cancers	50	82	132	6	36	42	174
Deaths from all causes	1,446	1,358	2,804	603	729	1,332	4,136
Number of deaths from all causes to 1 from cancer	29	16	.....	100	20	.....	.....
Eighty years and over:							
Deaths from cancers	18	19	37	4	17	21	58
Deaths from all causes	521	812	1,333	415	769	1,184	2,517
Number of deaths from all causes to 1 from cancer	29	43	.....	104	45	.....	.....
Total deaths from cancers	290	650	940	69	276	345	1,285
Total deaths from all causes	18,488	16,487	34,975	15,561	16,393	31,954	66,929
Number of deaths from all causes to 1 from cancer	63.5	25.5	37.3	216.0	59.4	91.8	52.0

TABLE XXXIV.—*Showing the number of still-births, including legitimates and illegitimates, with percentage of each to still-births, and of illegitimates to total illegitimates still-born, by color, for eleven years from 1879 to 1889, inclusive.*

Years.	Number of still-born.	Color.		Legitimate.		Illegitimate.		Percentage of legitimates to total still-births, by color.		Percentage of illegitimates to total still-births, by color.		Percentage of illegitimate still-born to total illegitimate still-born, by color.	
		White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.
1879	395	130	265	112	171	18	94	28.4	43.3	4.56	23.8	16.0	84.0
1880	358	119	239	105	159	14	80	29.3	44.4	3.90	22.3	14.9	85.1
1881	370	141	229	125	143	16	86	33.8	38.6	4.30	23.0	15.7	84.3
1882	351	140	211	124	146	16	65	35.3	41.5	4.66	18.6	19.7	80.3
1883	362	154	208	136	139	18	69	37.5	38.4	5.07	19.0	20.7	79.3
1884	351	132	219	123	141	9	78	35.0	40.2	2.57	22.2	10.3	89.7
1885	391	179	212	154	127	25	85	39.4	32.5	6.40	21.7	22.7	77.3
1886	406	164	242	149	138	15	104	40.4	34.0	3.70	25.6	12.6	87.4
1887	406	149	257	127	146	22	111	31.3	36.0	5.40	27.3	16.6	83.4
1888	458	182	276	156	155	26	121	34.1	33.0	5.68	26.4	17.7	82.3
1889	443	157	286	137	163	20	123	30.9	36.8	4.51	28.0	14.0	86.0
Totals	4,291	1,647	2,644	1,448	1,628	199	1,016	.....	.....	.....	.....	.....	.....
Means	.....	.....	.....	.....	.....	.....	.....	34.13	38.0	4.61	23.4	16.4	83.6

TABLE XXXV.—*Showing the number of legitimate and illegitimate births, with percentages of births to deaths, of still-births to births, of illegitimacy to births, and of illegitimacy to total illegitimacy, by color, for eleven years from 1879 to 1889, inclusive.*

Years.	Number of births.	Births, by color.		Legitimate.		Illegitimate.		Per cent. of births to deaths.	Per cent. of still-births to births.	Per cent. of illegitimacy to total births.
		White.	Col.	White.	Col.	White.	Col.			
1879	3,816	2,117	1,699	2,068	1,400	49	299	88.5	10.4	12.5
1880	4,095	2,297	1,798	2,241	1,456	56	342	97.3	8.8	12.0
1881	3,595	2,014	1,581	1,961	1,274	53	307	86.9	10.2	12.9
1882	3,391	1,800	1,591	1,747	1,277	53	314	74.2	10.4	12.3
1883	3,116	1,684	1,432	1,631	1,132	53	300	72.7	11.6	14.1
1884	3,224	1,747	1,477	1,684	1,196	63	281	66.9	10.9	13.4
1885	3,334	1,861	1,473	1,805	1,136	56	337	66.7	11.8	15.0
1886	3,516	1,981	1,535	1,916	1,184	65	351	75.2	11.5	15.2
1887	3,728	2,092	1,636	2,022	1,288	70	348	79.9	10.9	14.8
1888	3,670	2,035	1,635	1,964	1,262	71	373	72.8	12.5	16.1
1889	4,001	2,176	1,825	2,098	1,397	78	428	77.6	11.0	12.7
Totals	39,486	21,804	17,682	21,137	14,002	.....	.....	.....	.....	.....
Means	.....	.....	.....	.....	.....	667	3,680	78.0	10.9	13.7

Years.	Per cent. of legitimacy to total births, by color.		Per cent. of illegitimacy to total births, by color.		Per cent. of illegitimacy to total illegitimacy, by color.		Per cent. of white illegitimates to white births and of colored illegitimates to colored births.	
	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.
1879	54.2	36.7	1.31	7.83	14.0	86.0	2.32	17.60
1880	54.7	35.6	1.38	8.35	14.0	86.0	2.43	19.02
1881	54.6	35.4	1.47	8.54	14.8	85.2	2.63	19.42
1882	51.5	37.7	1.60	9.26	14.4	85.6	2.09	19.73
1883	52.4	36.3	1.74	9.63	15.0	85.0	3.14	20.95
1884	52.2	37.1	2.00	8.70	18.3	81.7	3.60	19.02
1885	54.1	34.7	1.68	10.18	14.3	85.7	3.00	22.88
1886	54.5	33.7	1.85	9.98	15.6	84.4	3.28	22.86
1887	54.3	34.5	1.83	9.33	16.7	83.7	3.34	21.27
1888	53.5	34.4	1.93	10.16	16.0	84.0	3.49	22.18
1889	52.4	34.9	1.95	10.70	15.4	84.6	3.59	23.45
Totals	53.5	35.5	1.70	9.33	15.3	84.7	3.00	20.76

TABLE XXXVI.—*Deaths from pneumonia during fourteen years from July 1, 1875, to June 30, 1889, inclusive, by years, months, and color, to June 30, 1889, inclusive.*

Years.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1875–'76	3	3	6	7	11	18	3	6	9	9	15	24	12	16	28	22	20	42
1876–'77	4	3	7	5	6	11	3	11	14	8	8	16	9	13	22	15	16	31
1877–'78	0	6	6	2	5	7	1	4	5	3	10	13	7	15	22	6	20	26
1878–'79	7	13	20	7	10	17	9	10	19	6	10	16	11	20	31	12	17	29
1879–'80	5	3	8	6	11	17	4	12	16	4	5	9	17	9	26	11	18	29
1880–'81	5	13	18	2	9	11	2	5	7	2	10	12	10	10	20	17	19	36
1881–'82	2	4	6	3	7	10	2	5	7	5	6	11	11	9	20	10	29	39
1882–'83	2	7	9	2	9	11	5	4	9	4	7	11	12	16	28	18	15	33
1883–'84	1	6	7	3	4	7	2	4	6	7	11	18	10	14	24	34	29	63
1884–'85	3	5	8	2	3	5	2	4	6	3	7	10	17	12	29	10	14	24
1885–'86	5	4	9	2	4	6	7	1	8	5	5	10	4	12	16	11	8	19
1886–'87	3	5	8	5	7	12	4	7	11	6	5	11	9	11	20	16	20	36
1887–'88	2	3	5	2	2	4	5	9	14	6	6	12	15	8	23	15	12	27
1888–'89	3	2	5	2	8	10	4	6	10	10	13	23	10	10	20	23	24	47
Total pneumonia	45	77	122	50	96	146	53	88	141	78	118	196	154	175	329	220	261	481
Total bronchitis	19	30	49	23	29	52	24	40	64	37	60	97	33	80	113	63	93	156
Total congestion of lungs	22	15	37	23	31	44	24	31	55	25	42	67	44	38	82	40	50	90
Grand total, acute diseases of the lungs for fourteen years	86	122	208	96	156	242	101	159	260	140	220	360	231	293	524	323	404	727

Year.	January.			February.			March.			April.			May.			June.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T	W.	C.	T.	W.	C.	T.
1875–'76	15	36	51	23	29	52	40	38	78	22	44	66	15	26	41	2	6	8
1876–'77	30	28	58	19	42	61	23	31	54	14	19	33	7	18	25	5	13	18
1877–'78	23	26	49	16	21	37	16	34	50	17	20	37	15	36	51	9	25	34
1878–'79	22	34	56	20	34	54	30	47	77	19	30	49	4	21	25	3	10	13
1879–'80	18	23	41	15	22	37	31	30	61	14	25	39	6	20	26	11	8	19
1880–'81	20	22	42	18	23	41	24	38	62	19	27	46	12	11	23	3	7	10
1881–'82	18	19	37	22	30	52	19	36	55	20	16	36	15	16	31	8	8	16
1882–'83	13	23	36	20	23	43	30	31	61	20	24	44	8	10	18	6	5	11
1883–'84	19	19	38	21	17	38	24	18	42	20	22	42	11	11	22	5	5	10
1884–'85	11	19	30	19	45	64	24	43	67	21	39	60	13	22	35	4	12	16
1885–'86	19	17	36	16	26	42	23	29	52	22	29	51	10	13	23	7	7	14
1886–'87	17	19	36	20	15	35	14	15	29	18	13	31	4	9	13	6	3	9
1887–'88	28	29	57	26	22	48	29	30	59	22	20	42	16	9	25	3	4	7
1888–'89	16	27	43	27	27	54	32	28	60	18	18	36	4	10	14	7	2	9
Total pneumonia	269	340	610	282	376	658	359	448	807	266	346	612	140	232	372	79	115	194
Total bronchitis	66	112	178	72	126	198	82	120	202	51	97	148	26	54	80	19	46	65
Total congestion of lungs	82	60	142	62	58	120	60	43	103	44	51	95	24	32	56	25	31	56
Grand total, acute diseases of the lungs for fourteen years	417	512	930	416	560	976	501	611	1112	361	494	855	190	318	508	123	192	315

ABLE XXXVII.—*Deaths from bronchitis during Fourteen Years, from* 1875 *to* 1889, *by months, years, and color, to June* 30, 1889, *inclusive.*

Years.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
75–'76	1	1	2	3	0	3	1	2	3	2	3	5	4	3	7	5	2	7
76–'77	3	2	5	3	2	5	2	3	5	3	5	8	2	2	4	6	7	13
77–'78	1	0	1	0	0	0	0	0	0	1	1	2	0	2	2	3	4	7
78–'79	1	1	2	2	4	6	3	2	5	3	2	5	3	4	7	6	4	10
79–'80	2	0	2	0	4	4	0	4	4	1	2	3	1	4	5	4	8	12
80–'81	0	4	4	2	4	6	4	5	9	2	4	6	1	6	7	1	5	6
81–'82	0	3	3	1	0	1	1	2	3	4	2	6	4	7	11	2	8	10
82–'83	1	1	2	1	0	1	0	4	4	2	6	8	1	8	9	4	7	11
83–'84	1	1	2	2	3	5	1	3	4	3	5	8	2	11	13	6	14	20
84–'85	1	5	6	2	1	3	2	3	5	2	4	6	1	5	6	4	10	14
85–'86	4	4	8	1	2	3	1	4	5	2	7	9	3	8	11	3	3	6
86–'87	2	4	6	4	4	8	3	5	8	6	9	15	4	11	15	2	7	9
87–'88	1	0	1	1	2	3	3	1	4	1	5	6	4	3	7	5	5	10
88–'89	1	4	5	1	3	4	3	2	5	5	5	10	3	6	9	12	9	21
Total	19	30	49	23	29	52	24	40	64	37	60	97	33	80	113	63	93	156

Years.	January.			February.			March.			April.			May.			June.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
75–'76	3	6	9	5	4	9	10	5	15	6	5	11	2	0	2	1	3	4
76–'77	5	4	9	2	10	12	2	5	7	5	1	6	1	0	1	0	3	3
77–'78	4	5	9	3	3	6	3	2	5	3	1	4	2	4	6	2	6	8
78–'79	6	4	10	2	5	7	6	18	24	2	12	14	0	5	5	2	1	3
79–'80	6	6	12	7	14	21	5	14	19	3	8	11	2	5	7	0	7	7
80–'81	4	7	11	6	8	14	4	9	13	3	11	14	2	5	7	1	0	1
81–'82	0	8	8	3	9	12	2	5	7	6	7	13	1	4	5	3	6	9
82–'83	4	5	9	2	9	11	5	7	12	1	5	6	2	6	8	1	5	6
83–'84	9	13	22	9	17	26	6	11	17	4	4	8	2	3	5	0	1	1
84–'85	3	10	13	8	4	12	5	3	8	2	13	15	2	7	9	2	2	4
85–'86	8	8	16	4	12	16	8	13	21	6	9	15	1	4	5	2	4	6
86–'87	2	8	10	8	7	15	7	5	12	4	8	12	5	8	13	2	3	5
87–'88	5	14	19	8	10	18	8	15	23	2	2	4	3	1	4	2	3	5
88–'89	7	14	21	5	14	19	11	8	19	4	11	15	1	2	3	1	2	3
Total	66	112	178	72	126	198	82	120	202	51	97	148	26	54	80	19	46	65

ABLE XXXVIII.—*Deaths from congestion of the lungs during Fourteen Years, from* 1875 *to* 1889, *by months, years, and color, to June* 30, 1889, *inclusive.*

Years.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
75–'76	2	1	3	2	1	3	2	4	6	0	4	4	2	5	7	1	2	3
76–'77	1	2	3	1	0	1	1	2	3	1	0	1	1	0	1	2	0	2
77–'78	1	0	1	3	3	6	2	1	3	0	3	3	3	1	4	0	2	2
78–'79	3	1	4	4	1	5	2	1	3	4	3	7	3	7	10	4	4	8
79–'80	4	1	5	1	0	1	5	1	6	1	1	2	6	4	10	0	10	10
80–'81	1	3	4	1	2	3	2	4	6	0	3	3	5	0	5	6	5	11
81–'82	1	0	1	1	1	2	2	1	3	3	4	7	4	4	8	4	1	5
82–'83	2	2	4	2	3	5	2	1	3	1	3	4	1	1	2	4	7	11
83–'84	0	0	0	0	3	3	0	3	3	2	3	5	4	1	5	1	3	4
84–'85	3	0	3	0	2	2	0	4	4	2	3	5	2	3	5	5	6	11
85–'86	1	1	2	3	0	3	3	0	3	1	5	6	4	2	6	2	3	5
86–'87	1	2	3	2	2	4	0	3	3	5	1	6	3	1	4	4	3	7
87–'88	2	1	3	0	1	1	2	6	8	1	1	2	3	4	7	4	1	5
88–'89	0	1	1	3	2	5	1	0	1	4	8	12	3	5	8	3	3	6
Total	22	15	37	23	21	44	24	31	55	25	42	67	44	38	82	40	50	90

TABLE XXXVI.—*Deaths from pneumonia during fourteen years from July 1, 1875, to June 30, 1889, inclusive, by years, months, and color, to June 30, 1889, inclusive.*

Years.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1875–'76	3	3	6	7	11	18	3	6	9	9	15	24	12	16	28	22	20	42
1876–'77	4	3	7	5	6	11	3	11	14	8	8	16	9	13	22	15	16	31
1877–'78	0	6	6	2	5	7	1	4	5	3	10	13	7	15	22	6	20	26
1878–'79	7	13	20	7	10	17	9	10	19	6	10	16	11	20	31	12	17	29
1879–'80	5	3	8	6	11	17	4	12	16	4	5	9	17	9	26	11	18	29
1880–'81	5	13	18	2	9	11	2	5	7	2	10	12	10	10	20	17	19	36
1881–'82	2	4	6	3	7	10	2	5	7	5	6	11	11	9	20	10	29	39
1882–'83	2	7	9	2	9	11	5	4	9	4	7	11	12	16	28	18	15	33
1883–'84	1	6	7	3	4	7	2	4	6	7	11	18	10	14	24	34	29	63
1884–'85	3	5	8	2	3	5	2	4	6	3	7	10	17	12	29	10	14	24
1885–'86	5	4	9	2	4	6	7	1	8	5	5	10	4	12	16	11	8	19
1886–'87	3	5	8	5	7	12	4	7	11	6	5	11	9	11	20	16	20	36
1887–'88	2	3	5	2	2	4	5	9	14	6	6	12	15	8	23	15	12	27
1888–'89	3	2	5	2	8	10	4	6	10	10	13	23	10	10	20	23	24	47
Total pneumonia	45	77	122	50	96	146	53	88	141	78	118	196	154	175	329	220	261	481
Total bronchitis	19	30	49	23	29	52	24	40	64	37	60	97	33	80	113	63	93	156
Total congestion of lungs	22	15	37	23	31	44	24	31	55	25	42	67	44	38	82	40	50	90
Grand total, acute diseases of the lungs for fourteen years	86	122	208	96	156	242	101	159	260	140	220	360	231	293	524	323	404	727

Year.	January.			February.			March.			April.			May.			June.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T	W.	C.	T.	W.	C.	T.
1875–'76	15	36	51	23	29	52	40	38	78	22	44	66	15	26	41	2	6	8
1876–'77	30	28	58	19	42	61	23	31	54	14	19	33	7	18	25	5	13	18
1877–'78	23	26	49	16	21	37	16	34	50	17	20	37	15	36	51	9	25	34
1878–'79	22	34	56	20	34	54	30	47	77	19	30	49	4	21	25	3	10	13
1879–'80	18	23	41	15	22	37	31	30	61	14	25	39	6	20	26	11	8	19
1880–'81	20	22	42	18	23	41	24	38	62	19	27	46	12	11	23	3	7	10
1881–'82	18	19	37	22	30	52	19	36	55	20	16	36	15	16	31	8	8	16
1882–'83	13	23	36	20	23	43	30	31	61	20	24	44	8	10	18	6	5	11
1883–'84	19	19	38	21	17	38	24	18	42	20	22	42	11	11	22	5	5	10
1884–'85	11	19	30	19	45	64	24	43	67	21	39	60	13	22	35	4	12	16
1885–'86	19	17	36	16	26	42	23	29	52	22	29	51	10	13	23	7	7	14
1886–'87	17	19	36	20	15	35	14	15	29	18	13	31	4	9	13	6	3	9
1887–'88	28	29	57	26	22	48	29	30	59	22	20	42	16	9	25	3	4	7
1888–'89	16	27	43	27	27	54	32	28	60	18	18	36	4	10	14	7	2	9
Total pneumonia	269	340	610	282	376	658	359	448	807	266	346	612	140	232	372	79	115	194
Total bronchitis	66	112	178	72	126	198	82	120	202	51	97	148	26	54	80	19	46	65
Total congestion of lungs	82	60	142	62	58	120	60	43	103	44	51	95	24	32	56	25	31	56
Grand total, acute diseases of the lungs for fourteen years	417	512	930	416	560	976	501	611	1112	361	494	855	190	318	508	123	192	315

TABLE XXXVII.—*Deaths from bronchitis during Fourteen Years, from* 1875 *to* 1889, *by months, years, and color, to June* 30, 1889, *inclusive.*

Years.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1875–'76	1	1	2	3	0	3	1	2	3	2	3	5	4	3	7	5	2	7
1876–'77	3	2	5	3	2	5	2	3	5	3	5	8	2	2	4	6	7	13
1877–'78	1	0	1	0	0	0	0	0	0	1	1	2	0	2	2	3	4	7
1878–'79	1	1	2	2	4	6	3	2	5	3	2	5	3	4	7	6	4	10
1879–'80	2	0	2	0	4	4	0	4	4	1	2	3	1	4	5	4	8	12
1880–'81	0	4	4	2	4	6	4	5	9	2	4	6	1	6	7	1	5	6
1881–'82	0	3	3	1	0	1	1	2	3	4	2	6	4	7	11	2	8	10
1882–'83	1	1	2	1	0	1	0	4	4	2	6	8	1	8	9	4	7	11
1883–'84	1	1	2	2	3	5	1	3	4	3	5	8	2	11	13	6	14	20
1884–'85	1	5	6	2	1	3	2	3	5	2	4	6	1	5	6	4	10	14
1885–'86	4	4	8	1	2	3	1	4	5	2	7	9	3	8	11	3	3	6
1886–'87	2	4	6	4	4	8	3	5	8	6	9	15	4	11	15	2	7	9
1887–'88	1	0	1	1	2	3	3	1	4	1	5	6	4	3	7	5	5	10
1888–'89	1	4	5	1	3	4	3	2	5	5	5	10	3	6	9	12	9	21
Total	19	30	49	23	29	52	24	40	64	37	60	97	33	80	113	63	93	156

Years.	January.			February.			March.			April.			May.			June.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1875–'76	3	6	9	5	4	9	10	5	15	6	5	11	2	0	2	1	3	4
1876–'77	5	4	9	2	10	12	2	5	7	5	1	6	1	0	1	0	3	3
1877–'78	4	5	9	3	3	6	3	2	5	3	1	4	2	4	6	2	6	8
1878–'79	6	4	10	2	5	7	6	18	24	2	12	14	0	5	5	2	1	3
1879–'80	6	6	12	7	14	21	5	14	19	3	8	11	2	5	7	0	7	7
1880–'81	4	7	11	6	8	14	4	9	13	3	11	14	2	5	7	1	0	1
1881–'82	0	8	8	3	9	12	2	5	7	6	7	13	1	4	5	3	6	9
1882–'83	4	5	9	2	9	11	5	7	12	1	5	6	2	6	8	1	5	6
1883–'84	9	13	22	9	17	26	6	11	17	4	4	8	2	3	5	0	1	1
1884–'85	3	10	13	8	4	12	5	3	8	2	13	15	2	7	9	2	2	4
1885–'86	8	8	16	4	12	16	8	13	21	6	9	15	1	4	5	2	4	6
1886–'87	2	8	10	8	7	15	7	5	12	4	8	12	5	8	13	2	3	5
1887–'88	5	14	19	8	10	18	8	15	23	2	2	4	3	1	4	2	3	5
1888–'89	7	14	21	5	14	19	11	8	19	4	11	15	1	2	3	1	2	3
Total	66	112	178	72	126	198	82	120	202	51	97	148	26	54	80	19	46	65

TABLE XXXVIII.—*Deaths from congestion of the lungs during Fourteen Years, from* 1875 *to* 1889, *by months, years, and color, to June* 30, 1889, *inclusive.*

Years.	July.			August.			September.			October.			November.			December.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1875–'76	2	1	3	2	1	3	2	4	6	0	4	4	2	5	7	1	2	3
1876–'77	1	2	3	1	0	1	1	2	3	1	0	1	1	0	1	2	0	2
1877–'78	1	0	1	3	3	6	2	1	3	0	3	3	3	1	4	0	2	2
1878–'79	3	1	4	4	1	5	2	1	3	4	3	7	3	7	10	4	4	8
1879–'80	4	1	5	1	0	1	5	1	6	1	1	2	6	4	10	0	10	10
1880–'81	1	3	4	1	2	3	2	4	6	0	3	3	5	0	5	6	5	11
1881–'82	1	0	1	1	1	2	2	1	3	3	4	7	4	4	8	4	1	5
1882–'83	2	2	4	2	3	5	2	1	3	1	3	4	1	1	2	4	7	11
1883–'84	0	0	0	0	3	3	0	3	3	2	3	5	4	1	5	1	3	4
1884–'85	3	0	3	0	2	2	0	4	4	2	3	5	2	3	5	5	6	11
1885–'86	1	1	2	3	0	3	3	0	3	1	5	6	4	2	6	2	3	5
1886–'87	1	2	3	2	2	4	0	3	3	5	1	6	3	1	4	4	3	7
1887–'88	2	1	3	0	1	1	2	6	8	1	1	2	3	4	7	4	1	5
1888–'89	0	1	1	3	2	5	1	0	1	4	8	12	3	5	8	3	3	6
Total	22	15	37	23	21	44	24	31	55	25	42	67	44	38	82	40	50	90

TABLE XXXVIII.—*Deaths from congestion of the lungs during Fourteen Years, from* 1875 *to* 1889, *etc.*—Continued.

Years.	January.			February.			March.			April.			May.			June.		
	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.	W.	C.	T.
1875–'76	1	3	4	3	4	7	3	5	8	8	2	10	1	1	2	0	2	2
1876–'77	7	4	11	5	1	6	3	3	6	2	3	5	2	1	3	2	0	2
1877–'78	5	2	7	5	1	6	6	2	8	1	4	5	3	4	7	3	1	4
1878–'79	6	6	12	4	8	12	5	4	9	3	6	9	2	2	4	2	1	3
1879–'80	6	2	8	9	7	16	1	2	3	2	6	8	2	0	2	0	3	3
1880–'81	4	2	6	6	6	12	2	5	7	1	0	1	3	1	4	3	3	6
1881–'82	7	4	11	5	5	10	7	3	10	6	2	8	1	7	8	0	4	4
1882–'83	6	6	12	1	1	2	4	3	7	4	5	9	3	3	6	1	3	4
1883–'84	6	10	16	1	6	7	8	1	9	2	3	5	2	1	3	5	3	8
1884–'85	10	5	15	7	5	12	6	1	7	3	5	8	1	1	2	0	5	5
1885–'86	1	6	7	4	4	8	2	1	3	2	4	6	0	2	2	3	2	5
1886–'87	11	4	15	3	3	6	4	2	6	6	5	11	2	2	4	2	2	4
1887–'88	8	3	11	5	5	10	4	6	10	2	4	6	0	4	4	0	2	2
1888–'89	4	3	7	4	2	6	5	5	10	2	2	4	2	3	5	4	0	4
Total	82	60	142	62	58	120	60	43	103	44	51	95	24	32	56	25	31	56

TABLE XXXIX.—*Showing the mean daily dew-point and the number of deaths from acute lung diseases in each month for Eight Years from* 1882 *to* 1889, *inclusive.*

Years.	July.		August.		September.		October.		November.		December.	
	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.
1882	64.6	10	64.8	13	66.9	13	53.2	24	39.7	39	34.5	54
1883	63.1	15	64.6	17	64.6	16	53.2	23	33.6	39	25.3	55
1884	64.8	9	59.6	15	55.9	13	49.0	31	37.6	42	29.2	87
1885	63.5	17	65.1	10	60.3	15	47.6	21	34.6	40	29.7	49
1886	65.6	19	63.7	12	55.3	16	47.4	25	37.7	33	27.6	30
1887	64.4	17	63.9	24	59.7	22	46.5	32	32.9	39	22.6	52
1888	69.6	9	63.0	8	55.0	26	42.5	20	30.3	37	27.2	42
1889	63.7	11	67.1	19	58.6	16	43.1	45	37.9	37	25.4	74
Totals	519.3	107	511.8	118	476.3	136	382.5	221	284.3	306	221.5	443
Means	64.9	13.4	63.9	14.7	59.5	17.0	45.3	27.6	35.5	38.2	27.7	55.4

Years.	January.		February.		March.		April.		May.		June.	
	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.	Dew-point.	Deaths.
1882	27.4	56	31.5	74	33.5	72	39.3	57	48.3	44	60.0	29
1883	24.3	57	29.0	56	25.8	80	42.1	59	50.2	32	62.9	21
1884	23.2	76	34.2	71	33.1	68	36.6	55	51.4	30	61.6	19
1885	24.0	58	18.6	88	24.0	82	37.7	83	50.0	46	62.9	25
1886	23.7	59	24.8	66	32.0	76	46.9	72	55.3	30	64.2	25
1887	22.6	61	28.6	56	23.9	47	37.1	54	56.0	30	59.7	18
1888	21.2	87	27.8	76	27.2	92	37.3	52	53.5	33	61.8	14
1889	28.8	71	19.6	79	31.6	89	42.3	55	54.5	22	62.1	16
Totals	195.2	525	214.1	566	231.1	606	319.3	487	419.2	267	495.2	167
Means	24.4	65.6	26.8	70.7	28.9	75.7	39.9	60.9	52.4	33.4	61.9	20.9

TABLE XL.—*Showing the percentage of deaths from pneumonia, bronchitis, and congestion of the lungs, also from total acute diseases of the lungs, to the total population, and also the total deaths from* 1876 *to* 1889.

Years.	Total population in each year.	Total deaths in each year.	Deaths from pneumonia in each year.	Percentage of deaths from pneumonia to total deaths.	Percentage of deaths from pneumonia to total population.	Deaths from bronchitis in each year.	Percentage of deaths from bronchitis to total deaths.	Percentage of deaths from bronchitis to total population.
1876	157,600	4,160	423	10.2	2.67	77	1.85	.50
1877	162,375	4,208	350	8.3	2.21	78	1.85	.48
1878	167,300	4,231	337	8.0	2.13	50	1.18	.30
1879	172,377	4,309	406	9.4	2.37	98	2.28	.57
1880	177,638	4,207	328	7.8	1.90	107	2.55	.60
1881	183,060	4,136	328	7.9	1.80	98	2.37	.53
1882	188,653	4,571	320	7.0	1.70	88	1.92	.46
1883	191,980	4,286	314	7.3	1.60	87	2.02	.45
1884	200,000	4,814	317	6.6	1.60	131	2.73	.65
1885	200,000	4,998	354	7.0	1.77	101	2.00	.50
1886	205,000	4,674	286	6.1	1.40	121	2.59	.60
1887	210,000	4,665	251	5.4	1.20	128	2.75	.60
1888	225,000	5,040	323	6.4	1.40	104	2.06	.46
1889	250,000	5,152	331	6.4	1.32	134	2.60	.53
Totals			4,668			1,402		
Means				7.4	1.79		2.20	.51

Years.	Total population in each year.	Total deaths in each year.	Deaths from congestion of the lungs in each year.	Percentage of deaths from congestion of the lungs to total deaths.	Percentage of deaths from congestion of the lungs to total population.	Total deaths from acute lung diseases, in each year.	Percentage of deaths from acute lung diseases to total deaths.	Percentage of deaths from acute lung diseases to total population.
1876	157,600	4,160	59	1.42	.31	559	13.5	3.5
1877	162,375	4,208	44	1.05	.27	472	11 2	2.9
1878	167,300	4,231	56	1.32	.33	443	10.5	2.7
1879	172,377	4,309	86	2.00	.50	590	13.7	3.4
1880	177,638	4,207	74	1.80	.41	509	12.1	2.9
1881	183,060	4,136	68	1.64	.37	494	11.9	2.7
1882	188,653	4,571	77	1.70	.40	485	10.6	2.6
1883	191,980	4,286	69	1.60	.36	470	11.0	2.5
1884	200,000	4,814	68	1.42	.34	516	10.7	2.6
1885	200,000	4,998	79	1.58	.39	534	10.6	2.7
1886	205,000	4,674	56	1.20	.27	463	10.0	2.3
1887	210,000	4,665	73	1.56	.35	452	9.7	2.2
1888	225,000	5,040	69	1.30	.30	496	9.8	2.2
1889	250,000	5,152	69	1.34	.30	534	10.3	2.1
Totals			947			7,017		
Means				1.49	.35		11.0	2.6

List of registered physicians, undertakers, and plumbers in the District of Columbia.

REGISTERED PHYSICIANS.

Name.	Residence.	Name.	Residence.
Acker, George N	1403 N. Y. ave. NW.	Byrne, Charles C	Soldiers' Home.
Adams, Arthur C	808 11th st. NW.	Byrns, William F	35 B st. SE.
Adams, B. B	927 N. Y. ave. NW.	Caldwell, Charles T	1736 Vt. ave. NW.
Adams, Elmore A	422 8th st. SE.	Callan, Cornelius V. N	1422 F st. NW.
Adams, James Osgood	937 N st. NW.	Cameron, Malcolm	915 E st. SE.
Adams, J. Lee	600 N. C. ave. SE.	Capehart, B. Ashburn	1015 L st. NW.
Adams, Samuel S	1525 I st. NW.	Cardoza, F. J	1439 Pierce Place.
Addison, Thomas	219 C st. NW.	Carman, Louis Dal	1351 Q st. NW.
Ainsworth, F. C	729 18th st. NW.	Carmichael, D. A	1308 F st. NW.
Allegei, Walter W	Takoma Park.	Carpenter, Jas. A. S	439 I st. NW.
Allen, Charles	415 7th st. SW.	Carpenter, John E	623 N. C. ave. SE.
Antisell, Thomas	1311 Q st. NW.	Carr, William P	1119 10th st. NW.
Antisell, Thomas, jr	1311 Q st. NW.	Carraher, J. V	815 E st. SE.
Appleby, James F. R	1430 33d st. NW.	Carroll, James J	1324 13th st. NW.
Armstrong, Wm. J	1629 Conn. av. NW.	Carroll, James M	1527 14th st. NW.
Artund, Frank E	Soldiers' Home, D. C.	Carroll, R. L	948 R st. NW.
Atkinson, Wade Hampton.	1011 G st. NW.	Chamberlin, Frank T	457 C st. NW.
Atwood, Oliver M	1935 11th st. NW.	Chappell, John W	Tennallytown, D. C.
Augusta, Alexander T	1319 L st. NW.	Chew, Thomas I	226 E. Capitol st.
Bacon, Charles A	1312 Conn. ave. NW.	Childs, William E	Mt. Pleasant.
Baggett, John B	Cor. Park and Pine sts., Mt. Pleasant.	Christie, Arthur	Anacostia, D. C.
Baker, Frank	1315 Corcoran st. NW.	Cissel, W. W. L	1310 Q st. NW.
Baker, William W	1510 Caroline st NW.	Clarke, James C	National Hom. Hosp'l.
Baldwin, William O	1918 H st. NW.	Clement, Alfred B. C	Mt. Pleasant.
Ball, Charles A	233 G st. NW.	Coe, Anton	1522 Caroline st.
Balloch, E. A	1533 P st. NW.	Cole, George R. L	Providence Hospital
Barker, Howard H	1116 H st. NW.	Collins, C. R	1335 N st. NW.
Barstow, Kate D	820 N. C. ave. SE.	Collins, John F	623 2nd st. NW.
Baxter, John B. G	824 7th st. NE.	Collins, T. Shields	8 G st. NW.
Baxter, Jedediah H	822 Conn. ave. NW.	Connell, Benjamin F	3220 N st. NW.
Bayne, John W	116 2d st. SE.	Cook, G. Tottenham	1217 I st. NW.
Beall, Benjamin M	1736 14th st. NW.	Cook, G. Wyeth	3 Thomas Circle.
Beall, W. W	114 6th st. SE.	Cook, Samuel Le Count	1526 L st. NW.
Beatty, Hugh W	216 G st. NW.	Corbin, Eliakim L	603 La. ave. NW.
Beatty, Louis K	610 E. Cap'l st.	Corey, Waterman F	1305 R st. NW.
Behrend, Adajah	709 H st. NW.	Cottrell, Joseph J	725 18th st. NW.
Bell, William S	Falls Church, Va.	Coues, Elliott	1726 N st. NW.
Bendimire, Frederick	617 F st. NW.	Coumbe, John T	1304 9th st. NW.
Bennett, Harrison H	1928 14th st. NW.	Crook, Harrison	508½ 13th st. NW.
Bennit, William W	719 8th st. SE.	Crusor, Collins B	2813 Dumbarton ave. NW.
Beresford, George G	Laurel, Md.	Curtis, J. W	1711 8th st. NW.
Bigelow, Horatio R	508 11th st. NW.	Custis, George W. W	110 E. Capitol st.
Billard, J. T	1336 G st. NW.	Custis, J. B. Gregg	110 E. Capitol st.
Binns, Douglass	1412 30th st. NW.	Cuthbert, Middleton F	1462 R. I. ave. NW.
Bird, James C	2210 Pa. ave. NW.	Daniel, Zadock	1457 14th st. NW.
Birdsall, C. W	1121 10th st. SW.	Danter, J. F	451 O st. NW.
Bishop, Francis B	1121 10th st. SW.	Darby, John J	711 7th st. NW.
Bland, M. Cora	1104 Md. ave. SW.	Darling, Benjamin F	Brightwood, D. C.
Boarman, Charles V	606 Mass. ave. NW.	Darling, Henry	813 14th st. NW.
Bogan, Martin Van B	421 G st. NW.	Davis, Charles A	1224 14th st. NW.
Bogan, Samuel	319 8th st. NE.	Deal, Henry B	Bennings, D. C.
Bogue, A. P	813 1st st. NW.	Dean, Julian W	1112 13th st. NW.
Bond, Samuel S	1314 I st. NW.	De Carre, Alfred	927 9th st. NW.
Bovee, John W	601 Mass. ave. NW.	De Meza, Manuel M	453 C st. NW.
Bowen, Charles H	1310 R. I. ave. NW.	Dexter, James E	Children's Hospital.
Brackett, John E	1007 B st. NE.	Dillenback, William J	1727 7th st. NW.
Brandt, William E	1106 3d st. NW.	Dixon, J. H	1134 8th st. NW.
Branson, John H	1222 C st. SW.	Donohoe, Florence	301 Pa. ave. SE.
Bray, John	Bennings, D. C.	Dooley, F. X	913 Mass. ave. NW.
Brayshaw, J. Lacy	317 C st. NW.	Dorsey, Lloyd	1221 13th st. NW.
Briscoe, Walter C	1138 Conn. ave. NW.	Dovilliers, Leopold V	Takoma Park.
Bromwell, Josiah R	716 4th st. NW.	Drane, F. C	627 Pa. ave. NW.
Bronson, Charles E	457 Mass. ave. NW.	Drawbaugh, John H	2903 Q st. NW.
Brooke, John Henry	320 3d st. SW.	Dubose, George P	926 I st. NW.
Brooks, Philip B	733 6th st. NW.	Dulaney, Joshua L	127 B st. SE.
Bruckheimer, Moses	1523 K st. NW.	Dunn, John W	1009 L st. NW.
Brambaugh, Gaius	1400 H st NW.	Duvall, W. T. S	1438 Corcoran st. NW.
Bryan, Joseph H	1512 9th st. NW.	Dyer, John I	1318 T st. NW.
Buck, Robert H	805 12th st. NW.	Eaton, Parley H	1216 18th st. NW.
Buckley, John W	811 I st. NW.	Edes, Robert T	1308 I st. NW.
Burfield, Robert M	457 Mo. ave. NW.	Edson, Susan A	510 E st. NW.
Burghart, Caroline A	1770 Mass. ave. NW.	Eliot, J. Llewellyn	Garfield Hospital.
Burnett, Swan M	1002 H st. NE.	Ellyson, R. M	408 N. J. ave. SE.
Burton, George C	1338 N. Y. ave. NW.	Elsom, James W	1105 9th st. NW.
Burwell, J. P	1545 I st. NW.	Evans, Warwick	504 6th st. SW.
Busey Samuel C	1212 10th st. NW.	Fenwick, George P	928 I st. NW.
Bushnell John H	1107 11th st. NW.	Finney, A. B	Anacostia, D. C.
Butler, William K		Fisher, G. W	1628 K st. NW.
		Fisher, R. C	

List of registered physicians, undertakers, plumbers, etc.—Continued.

REGISTERED PHYSICIANS—Continued.

Name.	Residence.	Name.	Residence.
Foster, Frank J	944 S st. NW.	Howard James H	1724 8th st. NW.
Foster, Romulus A	2029 Q st. NW.	Howard, Joseph T. D	1126 9th st. NW.
Foster, W. W	909 L st. NW.	Howard, Joseph T	1126 9th st. NW.
Fowler, William C	907 5th st. NW.	Howell, Arnold G	244 3d st. SW.
Fox, George L	1803 H st. NW.	Hughes, William D	216 G st. NW.
Francis, John R	2112 Pa. ave. NW.	Huntoon, A. J	21 H st. NW.
Franzoni, Charles W	810 H st. NW.	Hussey, D. J	1208 H st. NW.
Freer, James A	924 N. Y. ave. NW.	Hutton, W. A. B	Garfield Hospital.
French, Ricardo D	1316 T st. NW.	Hyatt, Frank	900 K st. NW.
French, William B	800 A st. SE.	Ingram, Thomas D	1305 H st. NW.
Friedrich, Leon L	323 East Capitol st.	Irvin, Fairfax	1727 19th st. NW.
Fry, Henry D	1133 14th st. NW.	Jameson, A. B	Park st., Mt. Pleasant.
Gaines, Richard L	2131 7th st. NW.	Janney, Edgar	12 Iowa Circle.
Gardner, Frank A	1016 14th st. NW.	Jenkins, F. T	2115 Pa. ave. NW.
Geddes, William	221 E. st. NW.	Johnson, Albert E	213 1st st. SE.
Gibbs, B. Frank	1111 9th st. NW.	Johnson, C. C	2306 6th st. NW.
Gibbs, Thomas F	935 R. I. ave. NW.	Johnson, Charles C	627 K st. NW.
Gilbert, Charles B	1011 H st. NW.	Johnson, Henry L. E	1400 L st. NW.
Gill, William T	Emergency Hospital.	Johnson, J. B	922 N. Y. ave. NW.
Gilium, C. F	2024 13th st. NW.	Johnson, Joseph Taber	1728 K st. NW.
Gilpin, George E	Tennallytown, D. C.	Johnston, R. L	112 C st. NE.
Gleeson, James K. P	1316 R st. NW.	Johnston, George Woodruff.	
Glennan, J. D	420 Boundary st. NW.	Johnston, William W	1603 K st. NW.
Glennan, Patrick	420 Boundary st. NW.	Jolly, Bushrod B	710 N st. NW.
Gobrecht, William H	1222 11th st. NW.	Jones, W. H	1916 11th st. NW.
Golding, W. W	Gov't Hospital for the Insane.	Joyce, James W	601 E st. NW.
Goldsborough, Edward K.	1331 K st. NW.	Julihn, M. L	200½ 7th st. SW.
Goodell, Charles F	920 B st. SW.	Keech, Thomas A. R	424 E. Capitol st.
Goodman, William R	216 13½ st. SW.	Keenan, John F	923 Va. ave. SW.
Goodwin, Eugene	1224 9th st. NW.	Kelly, Daniel J	1635 19th st. NW.
Goolrick, Peter	1411 G st. NW.	Ketcham, Orlando C	37 C st. NE.
Graham, Neil F	907 N. Y. ave. NW.	Kerr, James	1314 19th st. NW.
Grealish, D. W	2065 32d st. NW.	King, A. F. A	726 13th st. NW.
Griffith, M. J	1405 5th st. NW.	King, Ernest F	923 M st. NW.
Groot, S. I	924 N. Y. ave. NW.	King, William R	812 11th st. NW.
Grinder, George W	630 B st. NE.	Kingsman, R. T	701 E. Capitol st.
Gross, George	311 E. Capitol st.	Kisner, Thomas J	Room 7, St. Cloud B'ld'g.
Guiteras, D. W	U. S. Navy.	Kleinschmidt, C. H. A	3045 N st. NW.
Gunnell, Francis M	600 20th st. NW.	Kolopinski, Louis	621 I st. NW.
Hagner, Charles F	1507 H st. NW.	Koones, Charles K	W. A. Hospital.
Hagner, Daniel R	1812 H st. NW.	Kramer, Thomas B	634 A st. SE.
Hall, Arthur J	421 H st. NW.	La Fetra, G. H	606 9th st. NW.
Hamilton, John B	9 B st. NW.	Lamb, D. S	800 10th st. NW.
Hammett, Charles M	644 F st. SW.	Lamb, John Melvin	706 B st. SW.
Hammond, Thomas V	713 H st NW.	Landers, Thomas	1022 8th st. NW.
Hamon, Samuel L	Children's Hospital.	Lang, Charles J	336 11th st. SE.
Handy, William E	300 A st. SE.	Latimer, George	1326 N. Y. ave. NW.
Hansman, Theodore	724 13th st. NW.	Lawyer, Winfield P	1912 I st. NW.
Harries, William Arthur.	1741 N. J. ave. NW.	Leach, Hamilton E	400 7th st. SW.
Harrison, George B	1345 F st. NW.	Leahy, D. C	907 N. Y. ave. NW.
Harrison, J. Stinson	1226 F st. NW.	Lee, George	1333 Vt. ave. NW.
Harrison, J. Stewart	Anacostia, D. C.	Lee, William	2111 Pa. ave. NW.
Hart, Mary Ester	1109 G st. NW.	Leech, D. Olin	722 H st. NE.
Hartigan, James F		Leech, George A	2217 13th st. NW.
Harvey Allen L	933 K st. NW.	Lewis, C. O	Bladensburg, Md.
Harvey, Heber M	610 B st. NE.	Lincoln, N. S	1514 H st. NW.
Harvey, P. F	1814 G st. NW.	Linn, Samuel F	3143 Dunbarton st. NW.
Havenner, George C	Anacostia, D. C.	Lippincott, T. S	1820 K st. NW.
Hawkes, W. H	734 17th st. NW.	Little, J. J	1511 R st. NW.
Hazen, David H	407 6th st. SW.	Little, Joseph W	1313 14th st. NW.
Hazen, William P. C	511 E. Capitol st.	Livingston, Lemuel	1914 11th st. NW.
Helton, A. S	409 4th st. N. E.	Lorini, Raphael	1418 20th st. NW.
Henderson, George	817 T st. NW.	Lovejoy, J. W. H	900 12th st. NW.
Herbert, J. Wells	205 H st. NW.	Luce, Charles R	206 B st. SE.
Herbert, J. W	Marine Barracks.	Luckett, William F	1351 Corcoran st. NW.
Heron, George H	1214 6th st. NW.	Luttrell, S. S	600 6th st. NW.
Heron, William H	1214 6th st. NW.	Lyon, S. B	Gov't Hosp. for the Insane.
Hickling, D. P	221 3d st. NW.	Macdonald, T. L	226 8th st. SW.
Hill, Richard S	213½ E. st. NW.	McArdle, Thomas E	707 12th st. NW.
Hislop, Margaret	313 M st. NW.	McBlair, J. H	2029 I st. NW.
Hochling, Adolph	1355 Corcoran st. NW.	McCarty, Melvin	701 15th st. SE.
Hofer, Andrew F	801 O st. NW.	McKim, Samuel A. H	25 5th st. SE.
Hoffman, W. J	222 E st. NW.	McKone, James J	Central Dispensary.
Holden, Raymond T	802 6th st. SW.	McLain, J. S	1924 N st. NW.
Holmes, Charles	1737 11th st. NW.	McLaughlin, Thomas N	825 14th st. NW.
Hood, Thomas B	1009 O st. NW.	McLeod, Wilfred	Cor. Frederick & Prospect sts.
Hoover, Franklin Pierce.	1615 13th st. NW.	McPherson, Dorsey M	1822 15th st. NW.
Hore, Cassius W	400 7th st. SW.		
Hosford, Elihu	1101 G st. NW.		
Houston, Samuel	1417 Columbia st. NW.		
Howard, Horatio N	918 Mass. ave. NW.		

List of registered physicians, undertakers, and plumbers, etc.—Continued.

REGISTERED PHYSICIANS—Continued.

Name.	Residence.
McVary, Stephen	616 2d st. SW.
McWilliams, A	461 Mo. ave. NW
Mackall, James McV	1207 31st st. NW.
Mackall, Louis	1203 31st st. NW.
Maddox, William J	403 H. st. NE.
Maddox, W. B	2139 Pa. av. NW.
Madison, Benjamin F.	417 B st. SE.
Magruder, George L	815 Vt. ave. NW.
Mallam, Charles E	1231 N. Y. ave. NW.
Mallan, Thomas F	216 2d st. SE.
Manning, William P	2030 14th st. NW.
Markwriter, John J	705 6th st. NW.
Marmion, William V	1168 F st. NW.
Marr, Samuel S	1415 10th st. NW.
Marshall, Collins	1010 11th st. NW.
Marsteller, A. A.	304 C st. NW.
Martin, Thomas	310 N. Y. ave. NW.
Marvil, Philip	1202 K st. N. W.
Marx, George	924 Mass. ave. NW.
Mason, John Edwin	2100 H st. NW.
Mason, William C	801 L st. NW.
Mauss, Richard G	1701 6th st. NW.
Mauss, Richard J. S	1701 6th st. NW.
Maxwell, Charles D	1716 I st. NW.
May, John Frederick	2022 G st. NW.
Mayfield, Clifton	1333 30th st. NW.
Mead, Theodore	902 22d st. NW.
Means, S. R	Gov't Hosp. for the Insane.
Meriam, A. C	622 N. J. ave. NW.
Meriam, Ephraim C	622 N. J. ave. NW.
Middleton, Rosier	1838 9th st. NW.
Miller, Thomas	1616 7th st. NW.
Miller, William L	410 K st. NW.
Moffat Samuel S	721 11th st. NW.
Moore, Joseph B	57 K st. NW.
Moore, Mark W	1203 N. Cap. st.
Moran, John F	3009 M st. NW.
Morgan, Ethelbert Carroll	918 E st. NW.
Morgan, Edwin Lee	1909 Pa. ave. NW.
Morgan, J. Dudley	907 E st. NW.
Morris, G. G	708 13th st. NW.
Morrison, Mary E	1901 Vt. ave. NW.
Morsell, William F	1610 13th st. NW.
Muhleman, Samuel A	808 N. J. ave. NW.
Muncaster, Magruder	1405 N. Y. ave. NW.
Muncastor, Otho M	1405 N. Y. ave. NW.
Mundell, John H	1022 18th st. NW.
Munson Reginald	1140 Conn. ave. NW.
Murphy, P. J	Columbia Hospital.
Naylor, William L	456 M st. NW.
Neale Richard A	1808 Pa. ave. NW.
Neall, John H	1603 7th st. NW.
Neely, John R	205 1st st. SE.
Newman, Henry M	2403 Pa. ave. NW.
Newton, Lewis E	413 L st. NW.
Norcom, Henderson	456 C st. NW.
Norton, C. A	923 8th st. NW.
Norton, Thomas M	2033 H st. NW.
Norwood, John C	Superior st. near 16th st., Meridian Hill,
Nourse, Henry D	2823 Q st. NW.
Ober, George C	210 B st. SE.
Ogden, David M	2903 Q st. NW.
Okie, William T	1331 F st. NW.
Osmun, Charles J	917 12th st. NW.
Palmer, Gideon S	1113 Mass. ave. NW.
Palmer, William G	929 H st. NW.
Parcel, John C	38 Defrees st.
Parkinson, B. A	434 H st. NW.
Parsons, Mary A	1216 H st. NW.
Patten, Joseph L	2100 H st. NW.
Patterson, A. C	Gov't Hosp. for Insane.
Patterson, De Witt C	919 I st. NW.
Penrod, Hiram J	Mt. Pleasant, D. C.
Perkins, James T	22 8th st. NE.
Perry, George N	1524 14th st. NW.
Peter, Armstead	3044 O st. NW.
Petteys, Charles V	917 O st. NW.
Pile, M. M	1230 14th st. NW.
Pomeroy, Mary A. Garrison.	919 G st. NW.
Pool, Benjamin G	945 R. I. ave. NW.
Pope, Gustavus W	1109 14th st. NW.
Porter, Henry C	3035 O st. NW.
Posey, C. H	1327 G st. NW.
Postley, Charles E	1429 11th st. NW.
Poulton, William E	426 4½ st SW.
Pratt, Daniel	95 Myrtle st.
Prentiss, Daniel W	1101 14th st. NW.
Pugh, Whitman H	516 13th st. NW.
Purcell, McDaniel	419 N st. NW.
Purman, J. J	1435 Chapin st.
Purman, L. C	1723 5th st. NW.
Purvis, Charles B	1118 13th st. NW.
Pyles, Marian	1316 11th st. NW.
Pyles, Richard A	Anacostia, D. C.
Radcliffe, Samuel J	1523 K st. NW.
Rauterberg, Charles	215 3d st NW.
Rauterberg, Lewis E	510 5th st. NW.
Ravenburg, Rudolph	1448 Pierce st. NW.
Raymond, John U	85 K st. NW.
Reid, Lewis H	608 12th st. NW.
Reilly, James R	221 4½ st. SW.
Reuss, Peter J	307 G st. NW.
Reyburn, Robert	714 13th st. NW.
Reyburn, Robert, jr	714 13th st NW.
Rich, F. R	1227 31st st. NW.
Richardson, Charles W	1106 L st. NW.
Richardson, G. A	Hyattsville, Md.
Riggs, Daniel H	1012 Mass ave. NW.
Richie, Lewis W	3259 N st. NW.
Rixey, P. M	1707 N. Y. ave. NW.
Robbins, Henry A	1214 15th st. NW.
Roberts, C. Weston	1007 H st. NW.
Roberts, Grace	420 C st. SE.
Roberts, Palmer W	1106 B st. NE.
Roberts, Robert R	429 3d st. NE.
Roberts, William E	715 G st. SE.
Robinson, Alexander L	1120 13th st. NW.
Robinson, Thomas	1328 T st. NW.
Roethe, Henry L	509 E st. NW.
Roome, Edward	1317 Corcoran st. NW.
Rosse, Irving	1732 H st. NW.
Rowland, John A	600 6th st. NW.
Roy, Philip S	1005 9th st. NW.
Saffold, James P	1604 8th st. NW.
St. Clair, F. O	1428 R. I. ave. NW.
Samson, George C	2423 Pa. ave. NW.
Schaeffer, Edward M	904 14th st. NW.
Scholl, Joseph	615 D st. NW.
Schott, G. J. Van	206 E. Capitol st.
Seifritz, Paul	213 3rd st. NW.
Sellhausen, Ernest A	636 G st. NW.
Sessford, Joseph S. T	1908 N. H. Ave NW.
Sexton, Edward J	201 2nd st. SE.
Shadd, F. J	Freedman's Hospital.
Shearer, Juliet G	1216 H st. NW.
Shekell, Abraham B	1529 32nd st. NW.
Shirley, C. B	1336 Q st. NW.
Shoulters, G. H	1444 R. I. Ave. NW.
Shute, D. Kerfoot	1111 N st. NW.
Smith, Hugh M	1248 N. J. ave. NW.
Smith, Julia E	1100 M st. NW.
Smith, Thomas C	1133 12th st. NW.
Smith, William T	Freedman's Hospital.
Snowden, Arthur	1272 N. H. ave. NW.
Snyder, Arthur	3051 N st. NW.
Sohon, Fred	Emergency Hospital.
Sonnenschmidt, Chas. W.	1307 H st. NW.
Sothoron, James T	1919 I st. NW.
Sowers, Z. T	1320 N. Y. ave. NW.
Spackman, Mary D	1634 16th st. NW.
Sprigg, William M	218 Ind. ave. NW.
Squire, Lucius T	1720 9th st. NW.
Squire, Susanna J	1720 9th st. NW.
Stack, Morris J	Gov't Hospital for the Insane.
Stafford, John J	467 F st. SW.
Stanford, Flora H	411 H st. NE.
Stanton, Joshua O	1344 G st. NW.
Stearns, S. S	1425 R. I. ave. NW.
Stephenson, Joseph G	1007 F st. SW.
Stewart, George C	1321 F st. NW.

List of registered physicians, undertakers, and plumbers, etc.—Continued.

REGISTERED PHYSICIANS—Continued.

Name.	Residence.	Name.	Residence.
Stockstill, David C	808 I st. NW.	Walsh, Ralph	1328 N. Y. ave. NW.
Stone, Charles G	Brightwood, D. C.	Walter, John	1010 F st. NW.
Stone, T. Ritchie	1630 R. I. ave. NW.	Ward, William W	2025 H st. NW.
Stone, I. S	Lincoln, Va.	Waring, J. H. N	1933 11th st. NW.
Street, Daniel B	730 9th st. NE.	Warman, W. H. H	939 T st. NW.
Strickler, M. B	912 East Capitol st.	Watts, S. Roger	1808 M st. NW.
Suddarth, James L	821 North Capitol st.	Webb, E. Douglass	1228 14th st NW.
Sumby, Sidney A	315 F st. SW.	Weller, J. R	1912 11th st. NW.
Sumner, Jeannette J	1300 R. I. ave. NW.	Wells, C. A	Hyattsville, Md.
Suter, Henderson	1207 31st st NW.	Werner, Philip P	608 Mass ave. NE.
Swett, Fred Kimball	934 French st. NW.	West, George W	1102 14th st. NW.
Swormstedt, Lyman B	1455 14th st. NW.	West, Theodore S	604 H st. NW.
Talbott, H. T	101 2nd st. NW.	Weston, Edward	1609 13th st. NW.
Tancil, Arthur W	2116 Pa. ave. NW.	White, C. H	Museum of Hygiene.
Tarkington, Joseph A	217 D st. NW.	White, James	Brightwood, D. C.
Taylor, Leroy M	701 M st NW.	Wilder, J. R	1912 11th st. NW.
Taylor, Susan M	308 Mass ave. NE.	Williams, Green	1463 Pierce Place NW.
Taylor, T. Archibald	Cor. 3rd st. and Mass. ave. NE.	Wilson, L. D	21 3d st. NE.
		Winslow, Caroline B	1 Grant Place NW.
Taylor, Thomas	238 Mass. ave. NE.	Winter, Eugene C. C	815 4½ st. SW.
Taylor, William H	619 M st. NW.	Winter, John T	1528 9th st. NW.
Thoissen, William J. R	2226 6th st. extended.	Wirt, William D	440 H st. NW.
Thompson, J. Ford	804 17th st. NW.	Wise, Thomas W	606 M st. NW.
Thompson, M. F	473 Md. ave. SW.	Witmer, A. H	Government Hospital for the Insane.
Toner, Joseph M	615 La ave. NW.		
Torry, Turner	Anacostia, D. C.	Wolhaupter, David P	801 H st. NW.
Townshend, Smith	221 4½ st. NW.	Woodward, William C	125 N. Y. ave. NW.
Trist, Horace	808 H st. NW.	Woodman, Frank J	611 E. Capitol st.
Trott, Thomas H	232 N. J. ave. SE.	Wooley, George W	942 T st. NW.
Trudgian, Josiah B	109 Mass. ave. NW.	Wooster, Mary L	2026 14th st. N. W.
Turner, T. J	1707 N. Y. ave NW.	Wurdeman, A. V	Washington Eye and Ear Infirmary.
Tyler Abbie C	401 3rd st. NW.		
Upham, William	601 P st. NW.	Yarnall, John H	3020 N st. NW.
Verdi, Tullio S	815 14th st NW.	Yarrow, H. C	814 17th st. N. W.
Wagner, George H	120 F st NE.	Young, James T	1336 N. Y. ave NW.
Wales, Philip S	813 Vt ave. NW.	Young, Parke G	1317 8th st. NW.

REGISTERED UNDERTAKERS.

Anderson, J. H	Hillsdale, D. C.	Kelly, William B	707 7th st. SW.
Barker, R. W	612 11th st. NW.	Lee, John W	322 Pa. ave. NW.
Birch, Jos. F	3043 M st. NW.	Mitchell, J. M	914 11th st. SE.
Boteler, E. M	735 8th st. SE.	McHenry, J. P	Mt. Olivet Cemetery.
Burgdorf, August	312 Pa. ave NW	McKerichar, Alexander	Glenwood Cemetery.
Betters, G. C. H	1408 S. C. ave. SE.	Mondy, M. L	Rock Creek Cemetery.
Berry, D. A	321 Va. ave. SW.	Minor, David	729 12th st. SE.
Bond, Thomas	Uniontown, D. C.	Murray & Nalley	1248 11th st. SE.
Brown, W. P., & Son	Cor. 9th and E sts. SE.	Parker, A	1734 L st. NW.
Burdette, William F	Presbyterian Cemetery.	Speare, W. R	940 F st. NW.
		Spindler, William F	1029 7th st. NW.
Bellew, Mrs. M. A	633 N. J. ave. NW.	Spindler, Fred., & Son	1233 7th st. NW.
Barnes, J	427 4½ st SW	Sigourney, W. S	2824 Pa. ave. NW.
Cain, R. S	1011 7th st. NW.	Shelton, J. H	Methodist Cemetery.
Campbell, George	500 K st. SW.	Smith, N	1723 Cedar st. NW.
Clements, J. T	1235 32d st. NW.	Sims, John	M st., Georgetown.
Cross, J. B	Congressional Cemetery.	Speaks, Henry	Payne's Cemetery.
		Spindler, Fred. J	1707 7th st. NW.
Cohen, Moses	8th bet. H and I sts. NW.	Sims, Arthur	341 H st. SW.
		Scott, Charles D	613 Pa. ave. SE.
Canter, C. E	1818 L st. NW.	Taylor, Joseph W	217 H st. NE.
Day, Addison	301 4½ st. SW.	Taylor, Clark J	515 11th st. SE.
Davis, J. H	1626 11th st. NW.	Tiless, Moses	Cor. 12th st. and R. I. ave. NW.
Dabney, J. H	441 L st. NW.		
Duvall, L. E	731 4½ st. SW.	Travers, D. T	1110 3d st. SW.
Dorsey, Robert	Tennallytown, D. C.	Talbert, R. T	34 H st NE.
Friess, Frederick W	1008 6th st. NW.	Wright, J. R	1137 10th st. NW.
Geier, Frank, Sons	1113 7th st. NW.	Wise, G. W	2900 M st. NW.
Gasch, Francis	Bladensburgh, Md.	Williams, Mrs. Lemuel	1705 Pa. ave. NW.
Gafford, W. H	Graceland Cemetery.	West, John	1113 Q st. NW.
Gawler, Joseph	1726 Pa. ave. NW.	Wiltberger, John B	Rock Creek Cemetery
Gant, Augustus	1408 S. C. ave. SE.	Walker, W. H	St. Albans Cemetery.
Harvey, R. F	922 Pa. ave. NW.	Wood, Martin V	702 T st. SW.
Herbert, J. F	Harmony Cemetery.	Winslow, James Henry	1206 R st. NW.
Henry, George B	1003 3d st. SW.	Williams, Lewis	2247 Boundary st. NW.
James, John S	Anacostia, D. C.	Young, R. D	440 3d st. SW.
Kickhany, William	52 2d st. Georgetown.	Zurhorst, G. P	320 Pa. ave. SE.

List of registered physicians, undertakers, and plumbers, etc.—Continued.

REGISTERED PLUMBERS.

Name.	Residence.
Atchison, Julius I	1316 14th st. NW.
Anadale, John A	1236 9th st. NW.
Anderson, James F	304 B st. SE.
Anderson, William L	400 E. Capitol st.
Arts, Samuel	3007 M st. NW.
Bond, R	117 Pa. ave. NW.
Barker, J. W	401 7th st. SW.
Bride, C. T	306 Pa. ave. SE.
Brien, James F	1542 9th st. NW.
Brooks, R. C	622 D st. NW.
Brooks, E. F	531 15th st. NW.
Barnard, Edward	926 19th st. NW.
Beuter, Max A	606 D st. NW.
Bagby, William W	807 4th st. NW.
Berry, William H., and James E. Suit	534 8th st. SE.
Brown, W. H	1830 7th st. NW.
Butler, John A	931 5th st. NW.
Busey, Walter	1313 5th st. NW.
Brill & Hayden	308 Pa. ave. NW.
Berry, W. C	503 9th st. NW.
Brown, Martin V	8th bet. E and G sts. SE., rear Odd Fellows' Hall.
Brown, Thomas	1316 Mass. ave. NW.
Bowden, Charles W	606 11th st. NW.
Bounds, Oliver	B. and O. depot.
Bailey, O	800 4½ st. SW.
Conner, James A	702 O st. NW.
Carpenter, Benjamin W	116 10th st. SE.
Campbell, Robert G	517 10th st. NW.
Caverly, Edward	1425 N. Y. ave. NW.
Campbell, William P	425 4½ st. SW.
Cole, Marcellus	403 10th st. SE.
Carmody, John	1241 6th st. SW.
Cruit, Henry K	817 9th st. NW.
Clark, J. B	1721 6th st. NW.
Cannon, Thomas	714 2d st. NE.
Daily, John	638 G st. NW.
Dougherty, William W	488 La. ave. NW.
Dent, Augustus S	814 19th st. NW.
Donaldson, Thomas S	1424 E st. NW.
Daly, Peter	315 12th st. NW.
Delaney, Peter J	3203 Pa. ave. NW.
Devereux, Frank N., and John Gaghan.	703 13th st. NW.
Duffy, William, and J. O'Day (Duffy & O'Day).	312 3d st. NW.
Dessey, C. E	2120 K st. NW.
Edwards, T. J	1322 12th st. NW.
Enright, Michael A	228 O st. NW.
Edwards, George T	808 D st. NW.
Etter, Walter	1229 7th st. NW.
Fitzgerald, Robert	22 G st. NW.
Fingles, P. A	317 4½ st. NW.
Farrell, John	604½ 10th st. NW.
Gorman, Edward	124 B st. NE.
Goodall, George W	601 C st. NW.
Goss, W. P	1241 4½ st. SW.
Garrett, Charles S	485 G st. SW.
Gibson, Thomas A	1505 Pierce Place NW.
Gallagher, Bernard	900 9th st. NW.
Green, George A	503 C st. NW.
Greenland, R. C	1331 14th st. NW.
Horan, James F	416 4½ st. SW.
Hay, Bushrod C	24 E st. NW.
Hannan, Daniel	517 F st. NW.
Herbert, J. A	
Hill, Richard A., and C. Rozier.	1741 11th st. NW.
Harrison, James T	603 Pa. ave. SE.
Hilleary, Theodore	1218 E st. NW.
Hannan, Edward J	517 11th st. NW.
Harrover, James R	2102 14th st. NW.
Humphreys, Thomas	1838 14th st. NW.
Hurley, John W	908 E st. NW.
Hutchinson, William T	510 7th st. SE.
Haislip, John W	908 9th st. NW.
Hutchins & Betz	1208 E st. NW.
Jenks, W. S	717 7th st. NW.
King, Frank A	1319 7th st. NW.
Keppel, John A	17 H st. NE.
Kerr, Thomas W	917 F st. NW.
Kranse, John	1910 K st. NW.
Keese, W. F	6th and Va. ave. NW.
Knorleine, George	619 C st. NW. and 94 Northern Market.
Knight, W. P	508 H st. NW.
Kane & Roach	1320 Pa. ave. NW.
Lockhead, James	1404 Pa. ave. NW.
Lyon, John	1208 D st. NW.
Lee, William	34 3d st. SE.
Lockhead, Charles	Sherman ave. NW.
McBee, Randolph	1227 7th st. NW.
Moran, John	2126 Pa. ave. NW.
McMahon, John J	901 26th st. NW.
Mitchell, John	820 14th st. NW.
Miller, Thomas W	932 Pa. ave. NW.
Marsden, Frank L	436 7th st. SW.
McCarthy, Michael A	626 N. Capitol st.
McKee, Alexander	112 D st. SE.
McNeir, George W	1101 E st. NW.
Merrillat, Oliver F	744 4th st. NW.
Mills, Romulo	1207 11th st. SE.
McAvoy, G. F	706 14th st. NW.
Maisok, G. H	1019 H st. SE.
Noonan, Timothy V	1121 Vt. ave. NW.
Nolan, James	721 14th st. NW.
Niland, Patrick	1150 20th st. NW.
O'Hagan, James	1917 Pa. ave. NW.
O'Hare, Edward	717 18th st. NW.
Power, John A., & Co	417 10th st. NW.
Pettit & Dripps	14th and B sts. NW.
Pierce, William S., and William H. Barry.	936 Pa. ave. NW.
Preddy? C	1118 E st. NW.
Quinter, Joseph E., jr	1323 Vt. ave. NW.
Ridgway, Edward A	1311 F st. NW.
Rothwell, William	119 10th st. NE.
Ragan, James	1014 Pa. ave. NW.
Reynolds & Murphy	1102 Conn. ave. NW.
Robinson, Mansard	238 R st. NW.
Shedd, Samuel S	432 9th st. NW.
Schaffer, George F	635 D st. NW.
Spearing, Samuel J	450 Pa. ave. NW.
Suman, James L	623 G st. NW.
Sherwood, Samuel H	1121 7th st. NW.
Shepherd, Aaron	2100 14th st. NW.
Sanderson, John W	2 F st. NW.
Shea, Daniel E	901 5th st. NW.
Stewart, Samuel H	440 6½ st. SW.
Sullivan, Daniel F	345 H st. SW.
Sullivan, W. F	1120 18th st. NW.
Soper, B. A	727 N. Capitol st.
Sullivan, William L	930 Del. ave.
Talty, James	1017 I st. NW.
Tennant, Alexander	1228 32d st. NW.
Thorn, Charles G	1223 F st. NW.
Thorn, Henry C	725 13th st. NW.
Thomas, William A	1337 9th st. NW.
Tolson, William	516 7th st. SE.
Tilp, Frederick	1617 N. J. ave. NW.
Umhau, C. F	1714 7th st. NW.
Venable & Sullivan	822 20th st. NW.
Venable, J. A	1332 13th st. NW.
Waters, Sandiford M	1213 32d st. NW.
Ward, William N	1304 H st. NW.
Williamson, D. S	605 N. Y. ave. NW.
Ward & Cunningham	414 11th st. NW.
Wall, William	916 26th st. NW.
Whalen, William	Montgomery Hotel, 32d st. bet. O and P sts. NW.

ADDITIONS TO THE LIBRARY.

Report of the State Board of Health of Michigan, 1887.
Proceedings and addresses at a sanitary convention held at Manistee, Mich., June 5 and 6, 1888.
Proceedings and addresses at a sanitary convention held at Albion, Mich., December 6 and 7, 1887.
Recent Advances in State Medicine, by Henry B. Baker, M. D., Secretary State Board of Health of Michigan, 1888.
Second Annual Report of the State Board of Health of Ohio, 1887.
Annual Report of the Health Department, City and County of San Francisco, Cal., 1888.
Report of the operations of the Metropolitan Police Department of the District of Columbia, 1888.
Report upon the state of public health in the City of Dublin for the year 1887.
First Annual Report of the Bureau of Health of the City of Philadephia, Pa., 1888.
Seventeenth Annual Report of the Local Government Board of London, England, 1887–'88.
Twenty-first Annual Report of the Health Department of Cincinnati, Ohio, 1887.
Report of the Surgeon-General of the Army, year ending June 30, 1888.
Report of the Commissioner of Internal Revenue for the year ending June 30, 1888.
Industrial Education in the South, by Rev. A. D. Mayo.
Thomas Jefferson and the University of Virginia, by H. B. Adams, Ph. D.
Annual Report of the Supervising Surgeon-General of the Marine Hospital Service for the fiscal year 1888.
Annual Report of the Health Department of the City of Cleveland for the year ending December 31, 1888.
First Annual Report of the Health Department of the City of San Diego, Cal., 1888.
Second Annual Report of the Interstate Commerce Commission, 1888.
Report of the Commissioner of Education, 1886–'87.
Annuaire Statistique De La Ville de Paris, 1886.
Eighteenth Annual Report of the Board of Directors of the Children's Hospital of the District of Columbia.
Twenty-second Annual Report of the Columbia Hospital for Women and Lying-in-Asylum, year ending June 30, 1888.
Seventeenth Annual Report of the Board of Health of Boston, Mass., 1888.
Report on Medical Education, Medical Colleges, etc., in the United States and Canada, 1765–1889, by John H. Rauch, Secretary Illinois State Board of Health.
Report upon a sanitary inspection of certain tenement house districts of Boston, Mass., 1889.
Bureau of Education, Circular of Information No. 6, 1888, Proceedings of the Department of Superintendence of National Educational Association.
Fourth Annual Report of the Board of Health of the City of Portland, Me.
Eleventh Annual Report of the Presbyterian Eye, Ear, and Throat Charity Hospital of Baltimore, Md., 1888.
Report of the Commissioner of Indian Affairs, 1888.
Annual Report of the Health Department of Baltimore, 1888.
Thirteenth Annual Report of the Board of Health of Utica, N. Y., 1888.
Traumatic Insanity and other effects of head injuries, by S. V. Clevenger, M. D., Chicago, Ill.
Annual Report of the Board of Health of Minneapolis, Minn., for the year ending March 31, 1889.
Second Biennial Report of the North Carolina Board of Health, 1889.
Statistisk-hygriaeniske Meddelelser fra Christinia.
Statistique-hygienique de la Ville de Christinia, 1889.
Annual Report of the Toledo Board of Health, 1888.
Annual Report of the City Officers of the City of Davenport, Iowa, year ending February 28, 1889.
Sixteenth Annual Report of the Board of Health of New Haven, Conn., 1888.
Ninth Annual Report of the Board of Health of Illinois, with appendix.
The Proceedings of the Quarantine Conference held in Montgomery, Ala., March 5, 6, and 7, 1889.
Annual Report of the Health Department of Richmond, Va., year ending December 31, 1888.
Thirty-fourth Annual Report upon Births, Marriages, and Deaths in the City of Providence, R. I., for the year 1888.
Sixth Annual Report of the Superintendent of Health of Providence, R. I., year ending December 31, 1888.

Proceedings and addresses at a sanitary convention held at Hastings, Mich., December 3 and 4, 1888.

Sixteenth Annual Report of Secretary of the State Board of Health of Michigan, year ending June 30, 1888.

Tenth Annual Report of the Board of Health of the City of Atlanta.

Third Annual Report of the State Board of Health of Ohio, year ending October 31, 1888.

The Sanitary Volunteer, June, 1889.

Report of the Department of Health of the City of Chicago, 1888.

Extract from Annual Report of Medical Officer of the Local Government Board, England, for 1885 (Manufacture of Rag Flack).

Twelfth Report of the State Board of Health of Wisconsin, 1888.

A Summary of the Annual Reports of the Central Sanitary Bureau of the Home Department of the Imperial Japanese Government for 5 years from July, 1879, to June, 1884, inclusive.

Fünfter Jahresbericht des Stadt-Physikates über die Gesundheitsverhältnisse der Konigal Haupstadt Prag, 1885.

Third Annual Report of the Board of Health of Keokuk, Iowa, year ending March 31, 1889.

Twenty-second Annual Report of Health Department of the City of Cincinnati, Ohio, 1888.

Twelfth Annual Report of the Health Commissioner of St. Louis, Mo., 1888-'89.

Beretning Om Folkemængden og Sundhedstilstanden i Christiania i Aaret, 1888.

Fifth Annual Report of the Health Department of the City of San Antonio, Tex., year ending March 1, 1889.

First Annual Report of the Health Department of Mansfield, Ohio.

Extract from Ninth Annual Report of the State Board of Health of New York, Local Health Service of the State.

Absolute and Relative Value of Albumen and Casts, and of Renal Inadequacy in the Diagnosis and Prognosis of Disease of the Kidney.

Eleventh Annual Report of the State Board of Health of Rhode Island, 1888.

The Relation of Renal Diseases of the Nervous System.

Seventeenth Annual Report of the Board of Health of Boston, Mass.

CHART I (to Table 39).—*Illustrating the number of deaths from acute lung diseases for the twelve months, during eight years compared with the mean dew-point for the same time, from* 1882 *to* 1889, *inclusive.*

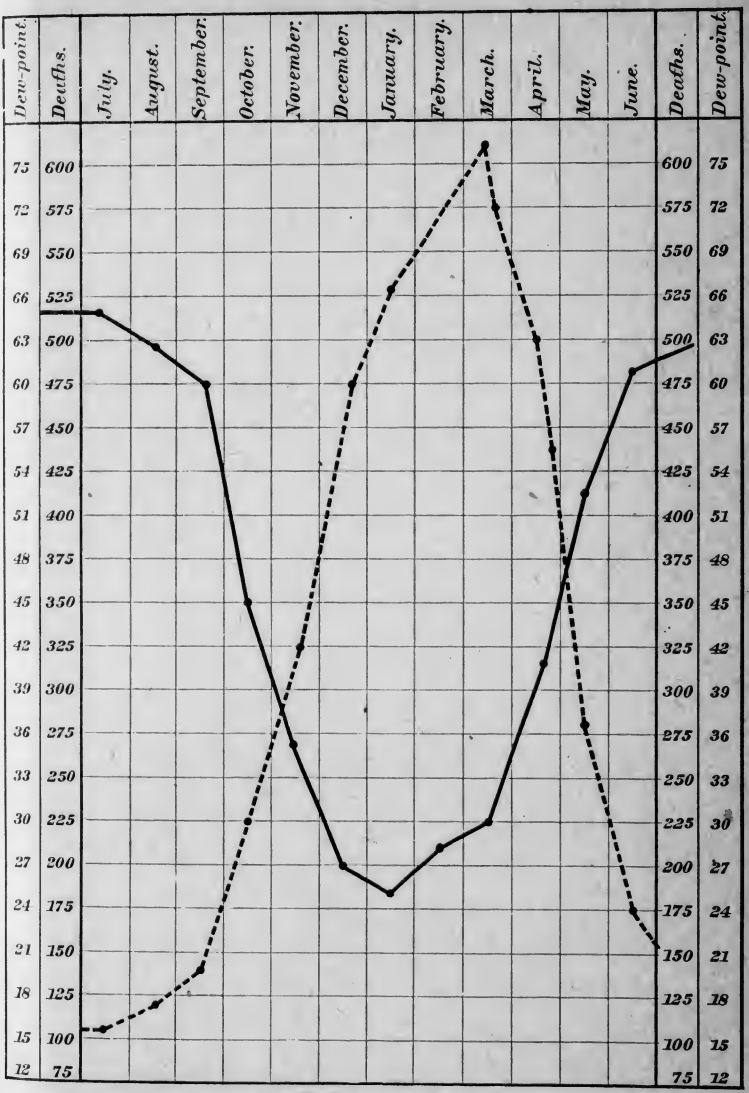
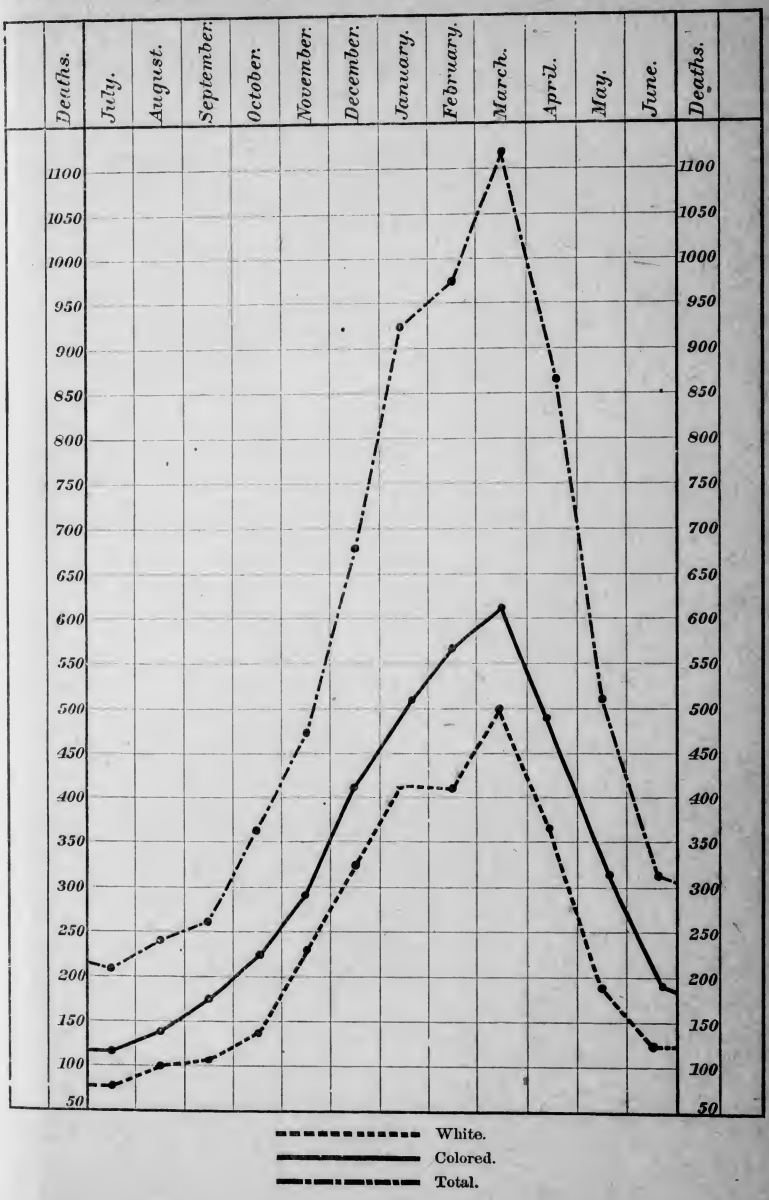


CHART II (to Table 36).—*Illustrating the deaths from acute lung diseases for fourteen years, by months and color.*



No. 1.

MAP

OF THE

CITY OF WASHINGTON

LOCATION OF DEATHS FOR THE YEAR ENDING JUNE 30, 1889.

EXPLANATION:

COMBINED NUMBERS SHOW TOTAL DEATHS ON EACH SQUARE.
DEATHS OF WHITE PERSONS ARE INDICATED BY NUMBERS IN RED.
THOSE OF COLORED PERSONS BY NUMBERS IN BLUE.

N. Peters, Photo-Lithographer, Washington D. C.

D C51 1

No II.

MAP

OF THE

CITY OF WASHINGTON

SHOWING LOCATION OF FATAL CASES OF ZYMOTIC DISEASES
FOR THE YEAR ENDING JUNE 30, 1889.

EXPLANATION:

- TYPHOID FEVER ●
- MALARIAL FEVER ×
- SCARLET FEVER ●
- DIPHTHERIA ■
- DIARRHŒAL DISEASES ×

N. Peters Photo. Lithographer. Washington D C

D C51 1

No III.

MAP

OF THE

CITY OF WASHINGTON

SHOWING LOCATION OF FATAL CASES OF LUNG DISEASES
FOR THE YEAR ENDING JUNE 30, 1889.

EXPLANATION:

CONSUMPTION	WHITE	●
	COLORED	●
PNEUMONIA AND BRONCHITIS	WHITE	■
	COLORED	■
OTHER ACUTE LUNG DISEASES	WHITE	×
	COLORED	×

N. Peters, Photo-Lithographer, Washington, D. C.

D C51 1

X.

REPORT

OF THE

BOARD OF TRUSTEES OF PUBLIC SCHOOLS

OF THE

DISTRICT OF COLUMBIA.

1888-'89.

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Drawing: Mrs. S. E. Fuller 944
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NOTE.—For Table of Contents of Report of Superintendent Cook, see page 159.

BOARD OF TRUSTEES OF PUBLIC SCHOOLS, DISTRICT OF COLUMBIA.

LOCAL COMMITTEES.

Divisions.	Names.	Terms expire.	Addresses.
First	Rufus H. Thayer, A. M	Sept. 13, 1892	Corcoran Building, room 47.
Second	John W. Ross, LL. D	Sept. 13, 1892	City post-office.
Third	James W. Whelpley, esq	Sept. 13, 1890	Treasury Department.
Fourth	George White, esq	Sept. 13, 1890	462 Maine avenue.
Fifth	John T. Mitchell, esq	Sept, 13, 1890	1209 F street, northwest.
Sixth	A. H. Witmer, M. D.	Sept. 13, 1890	St. Elizabeth Insane Asylum.
	James M. Gregory, A. M	Sept. 13, 1890	Howard University Grounds.
Seventh	Francis J. Grimke, A. M., D. D	Sept. 13, 1892	1930 Eleventh street, northwest.
Eighth	L. A. Cornish, esq	Sept. 13, 1890	Sixth Auditor's Office, Marini's Hall.

OFFICERS OF THE BOARD.

President.—JOHN W. ROSS, LL. D., city post-office.
Secretary.—J. G. GURLEY, Franklin School.
Superintendent of schools.—W. B. POWELL, A. M., Franklin School.
Superintendent of colored schools.—G. F. T. COOK, A. M., Sumner School.

MEETINGS OF THE BOARD OF TRUSTEES.

The stated meetings of the board of trustees are held on the second Tuesday of each month, and also on the last Tuesday of June.

STANDING COMMITTEES OF THE BOARD.

On Rules: Messrs. Ross, Mitchell, Grimke.

On Ways and Means, Supplies and Accounts: Messrs. Whelpley, White, Cornish.

On Buildings, Repairs, and Furniture: Messrs. Mitchell, Witmer, Cornish.

On Normal and High Schools and Scholarships: Messrs. Thayer, Ross, Grimke.

On Teachers and Janitors: Messrs. Gregory, Witmer, Whelpley.

On Text-Books, Studies, Examinations and Promotions of Pupils: Messrs. White, Mitchell, Gregory.

On Penmanship, Music, and Discipline: Messrs. Grimke, Whelpley, Ross.

On Industrial Education, Drawing, and Night Schools: Messrs. Cornish, Thayer, White.

On Libraries and Annual Report: Messrs. Witmer, Thayer, Gregory.

REPORT OF THE COMMITTEE ON LIBRARIES AND ANNUAL REPORT.

The Commissioners of the District of Columbia.

GENTLEMEN: The forthcoming annual report of the school trustees and superintendents is full of interesting matter relating to the schools, their progress, and their necessities. The most urgent need is more pay for teachers. Our report, therefore, begins with the discussion of that subject.

PAY OF TEACHERS.

When this subject has been brought to the attention of the committees of Congress charged with the duty of making the appropriation for the schools, it has been their invariable custom to inquire, "Does not the average salary of teachers allowed by us compare favorably with the average salary in other large cities?"

It is frankly conceded that this question, if it must be answered categorically and without any consideration of accompanying conditions, must be answered in the affirmative. It would be, however, neither statesmanlike upon the part of the members of these committees nor fair to the just claims of those intrusted with the interests of our schools to determine this question by the analogy of other cities if the facts show that the conditions wholly differ.

Our last report exhibited a peculiarity of the public schools of this city which the statistics of each succeeding year emphasize and which, to the mind of any one who will give it fair consideration, establishes the fact that the average salary prevailing in other localities free from this peculiarity, if followed here, must greatly embarrass and impair the efficient conduct of our schools. That peculiarity is the fact that, while in every other city in the United States the attendance largely preponderates in the lower grades, the higher grades, which are the most costly, are comparatively thinly attended. In the white schools of the District of Columbia the attendance throughout the entire series of grades is surprisingly uniform and demonstrates the fact that in this District the children generally continue in school throughout the first five grades, and that nearly or quite two-thirds of them continue throughout the entire eight-year course. Thus, in the first six divisions, embracing all the white children and all the colored children residing outside the limits of the cities of Washington and Georgetown, there were during the past year enrolled in the first grade 4,032 pupils; in the second,

3,149; in the third, 3,149; in the fourth, 3,466, and in the fifth, 3,026; while in the sixth grade there were 2,606; in the seventh, 2,123, and in the eighth, 1,750.

Reference to our report of last year on this same subject will show the same relative attendance in the various grades, which will also appear on examination of the statistics during the earlier years. Another striking circumstance, illustrating the same peculiarity, is the fact that of the increase of attendance in these divisions during the past year, aggregating a total of 784, 256 represents the increase in the High School, 526 the increase in the four higher grades or grammar schools, while the increase in the four lower or primary schools is only 2.

We have given most careful study into the causes of this striking peculiarity, which, upon examination, we find to be in no sense peculiar to the past year, but to characterize the schools of the District of Columbia throughout a series of years, extending as far back as the statistics before us have enabled us to pursue the inquiry, and we find these causes to be two, both of which spring from a single cause, namely, the absence of large manufacturing and industrial enterprises, whose existence in a community is always attended with the presence of a large laboring class, the educational privileges of whose children are limited to the lowest or primary schools. By reason of the fewer accumulations of large fortunes the wealth of the District of Columbia is more equally distributed than perhaps in any other of our American cities, and thus the average citizen is able to afford his children opportunity to take the full course of instruction provided in the public schools, and also, in the case of many of our citizens, to afford them the advantages of Kindergarten and other private primary schools during their earlier years. The increase in our advanced course is due, in so far as we are able to trace it, almost wholly to the transfer from private schools to the public schools of children entering the fifth and the higher grades.

It will be obvious to any intelligent person acquainted with this fact, and having access to the statistics of other cities in which the attendance in the primary grades vastly exceeds that in the higher schools, that any system of appropriation or provision for the needs of our schools which prescribes the same average salary here as in communities where the great majority of the teachers are employed in the primary schools, can have but one result, namely, to cripple and embarrass the efforts of the school board and the school officials to maintain a high standard of efficiency and educational success. It is hoped that you will be able to bring this matter, which is now a feature of the schools requiring your most urgent attention, to the careful consideration of Congress, to the end that not only may justice be done to our most worthy and deserving teachers, but that the public schools of the District may continue to maintain and to improve their already high standard, and furnish to the youth of our national capital the highest and best facilities for education.

THE WASHINGTON HIGH SCHOOL.

This branch of the public schools has been an especial sufferer during late years from the conditions above referred to. Four years ago its teaching force was regarded as equal to that of any similar institution of the country. Under the restrictions and limitations imposed by recent appropriations for the schools, we have been unable to retain the leading members of that force with few exceptions, one of whom is the present accomplished principal, the force having found more lucrative employment in private institutions. Their places we have been compelled to supply by the appointment, for the most part, of young college graduates, of marked ability and acquirements in many instances, but wholly inexperienced; and those, as they gain experience, proficiency, and reputation, we find ourselves unable to retain at the restricted salaries in our power to offer. The report of Dr. Lane, the principal, shows that the average salary paid in the Washington High School, with an enrollment of 1,253 advanced pupils, has been only $850, or less than the salary paid to the lowest class of clerks in the classified Government service; the latter being required to possess only the qualifications of copyist, while the former are largely graduates, and for the most part the leading graduates, of institutions such as Dartmouth College, Johns Hopkins University, Amherst College, Vassar, Cornell, Wellesley, the Columbian University, and other leading institutions, graduation from which requires years of diligent study and no inconsiderable expenditure of money. We submit that, in all fairness, the ensuing appropriation bill should either remove wholly the restrictions upon needed increases of salaries in this school, or that, as recommended by the principal, the limitation, if any be imposed, should not be less than $1,200, instead of $1,000, as at present, and that the appropriation itself should be large enough to admit of the imperatively necessary advances.

ACCOMMODATIONS.

The subject of accommodations is subordinated to the former topic in this report only for the reason that it is already present in the legislative mind, as is evidenced by the marked improvement of facilities of this character which have been accorded in the last three years. In the school year ending June 30, 1886, as was stated in our report for that year, out of a total enrollment of 32,336 pupils, 12,089 were restricted to one-half day attendance for want of rooms in which they could be instructed, notwithstanding the fact that a sufficient number of teachers were employed and paid to teach each of them the whole of every school day in the year if room for that purpose had been afforded. That report expressed the confident belief that this matter had only to be brought home to the attention of Congress in order to be remedied, and the appropriation for school buildings since that date, aided by the liberal sup-

plemental rental therein provided, has abundantly justified that belief. For the year just ended, out of a total enrollment of 35,764, only about 6,000 children have been limited to half-day schools. We trust that the determination of Congress to afford ample school-room accommodations for all children of the District will not be relaxed, and that the estimate for new buildings for the current year will be granted without reduction. If so, the school-room accommodation will be brought very nearly or quite abreast with the needs in this regard.

We would call especial attention to the matter of the high school building for the colored children of the District. As stated in previous reports, this high school is conducted in a building, only a part of which can be accorded for its accommodation, and which is located in an inconvenient part of the city for the great body of pupils for whom it is designed; a building which has little or no special adaptation for the purpose, and, in addition, every available seat in which is urgently needed to supply the section of the city in which it stands for schools of lower grade. The enrollment of the year just ended has been 416, which will be exceeded by the enrollment for the now current year. "The school is a most useful and important factor in the moral and intellectual development of a large and deserving portion of the population of the District, bearing their due share of taxation and other public burdens, and we submit that a suitable high school building, comparing favorably in location and appointments with the Washington High School, is both necessary and just."

A point has also been reached in the history of the Washington High School in which it has become apparent that a single high school is insufficient to meet the wants of a community numbering nearly or quite a quarter of a million of inhabitants. The attendance for the current year has reached the number of 1,400, which is not only enough to fill the High School building, including the addition thereto provided in last year's appropriation, but is as large a number as can be properly managed and instructed by a single corps of teachers. In addition, a single building in a territory of 60 square miles must necessarily be inconvenient of access to a large number of pupils. A temporary expedient may be found in the recommendation of the principal and the superintendent, that the course of study pursued in the first year of the High School be relegated to the grammar schools, constituting practically a ninth grade, a measure which is rendered feasible by the fact that in the first year but little in the way of apparatus, laboratories, and the like is essential to instruction of the pupils. The wisest and, in our judgment, the only complete remedy, however, lies in the establishment of two complete additional high schools, one located in the third, or Capitol Hill division, and the other in the northwest section of the city, either in or convenient to Georgetown. The establishment of these schools would involve considerable expenditure of money, not only in securing suitable sites and erecting

suitable buildings, but in being furnished, as they should be furnished, with an outfit equal in all respects to the present Washington High School; but such expenditure would be wisely made, and we are sure would be entirely acceptable to the tax-payers and the community at large.

CONTINGENT FUND.

In the third place, we would urgently recommend that the contingent fund annually appropriated by Congress be wholly set apart for the educational work of the schools, or else that it be so largely increased as to allow at least $25,000, the amount asked for in the estimates for the ensuing year, to be applied to these uses. At present the fund is annually diminished by the payment of insurance premiums upon all the school buildings of the District, gas bills, printing, and other incidentals, necessary, it is true, but so consuming the fund that the real contingent educational needs of the schools can not be supplied. The reports of the supervising principals show conclusively the value of more libraries and reference books in the various school buildings. In all the schools music is taught, and at least one piano in each building is almost an indispensable necessity; the library at the High School, the educational value of which is abundantly apparent from all the annual reports coming from that institution, sadly needs replenishing and enlargement, and, in various other particulars, the highest educational results call for expenditures from the contingent fund which that fund has heretofore been wholly inadequate to meet.

Various attempts have been made in the schools to supply books, pianos, and other needed paraphernalia by means of contributions solicited by the children, through the aid of entertainments, luncheons, and like measures, all of which to the board seem wrong in principle and prejudicial both to pupils and the cause of education, but which, though the board has been unable to sanction them, they have felt nevertheless equally unable to wholly prohibit, in view of the urgency of the needs which they were intended to supply. We now submit the matter to your honorable board, and through you to Congress, in the hope that such action will be taken as will supply our schools with the needed appointments without converting the children of our community into canvassing agents.

MANUAL TRAINING.

The additions to the public-school system of the District, introduced experimentally a few years since, have grown to be among its recognized, most useful features.

As to manual training the reports of the supervising principals show that, throughout the divisions, the exercises of this character are very popular with the children, that they manifestly contributed to, rather than impaired, their proficiency in their studies, that the parents of pupils have been almost uniformly interested in and enthusiastic over,

their results, and that a very large proportion of the children are carrying into their homes, practically, the acquirements thus gained by them.

NIGHT SCHOOLS.

The night schools continue to be well attended; their results have been and are most encouraging and productive of good to a very deserving portion of our community, and their operations are being attended with marked success by the enlargement of the curriculum of studies, as also by the introduction of manual training into them for the benefit of female pupils, teaching many of them housewifely accomplishments, which their surroundings and daily employment have heretofore rendered them unable to acquire.

In presenting and urgently pressing the foregoing needs of the schools for your consideration and that of Congress the board can not overlook the many causes of congratulation which have attended the operations of the schools for the last year. Every applicant entitled to enter the schools has been promptly admitted to them and provided with a competent teacher for every school hour of every school day in the year, with the fullest opportunity of attendance to that extent, excepting in so far as a resort to the one-half day system still continues necessary for want of sufficient school-rooms. The vexed question of equalization of the salaries of teachers has been settled in a manner which has been accepted in good part by all the teachers, notwithstanding the fact that it entails a reduction in the already scant salaries of many of the oldest and best of them, a hardship which the board will most gladly remedy if the average salary allowed by the next appropriation bill shall enable them to do so.

We earnestly recommend that this average salary may be fixed at $700, which, if done, would settle, as we believe, for many years to come the embarrassments hereinbefore set forth and the injustice to teachers which unavoidably results therefrom. The inequalities in the salaries of teachers receiving more than $1,000 we have been unable to remove because of the provision in the appropriation acts forbidding increase in the salary of any teacher in classes receiving $1,000 or upwards, and prohibiting the increase of the number of teachers in any of these classes; prohibitions which the accounting officers of the Treasury Department have construed not only to forbid increase in the aggregate of salaries above $1,000, but the increase of the number receiving $1,200; for example, by either promoting those now receiving $1,000 or $1,100 to that sum or by reducing to that salary those receiving larger amounts. Such equalization, therefore, as also, the equalization of the salaries of male and female teachers, can only be fully made when the restrictions in question are either omitted or so changed in their phraseology and accompanied by such additional grants of money as may render the same feasible.

The utmost harmony has prevailed between the teachers, the officers, and the board throughout the entire system. The order of the schools has been most excellent, and the work of the teachers and the progress and proficiency of the pupils have been not only gratifying to the trustees, but uniformly and most highly satisfactory to parents and other parties interested as well, if frequent and general expressions of commendation, and the almost total absence of complaints or adverse comments, may be taken as tests. The practical working and results of the public schools for the past and the current year would appear to be eminently satisfactory to parents and others interested in them, and, so far as the knowledge of the board extends, to be quite free from either specific or general complaint in any quarter. These are matters of congratulation to all our citizens, and justify the pride which the community at large is manifesting in its public schools. For this condition of things too much credit can not be given to those whose untiring efforts, under many discouragements and embarrassments, these results are due; namely, to Superintendents Powell and Cook, to the supervising principals of each of the divisions, and to the admirable teaching force of the public schools of the District of Columbia.

Respectfully submitted:

A. H. WITMER,
J. J. DARLINGTON,
JAMES M. GREGORY,
Committee on Annual Report.

REPORT OF SUPERINTENDENT POWELL.

The Board of Trustees of Public Schools of the District of Columbia.

GENTLEMEN: I have the honor to present a report of the schools under my supervision, which comprise the white schools of the city and the white and colored schools of the District outside the city, for the school year ending June 30, 1889.

Herewith find also the reports made to me by the supervising principals of the six divisions into which the school territory is divided, with those of the director of music and of drawing and those of the principal of the Washington High School and of the Washington Normal School.

It gives me pleasure and gratification to present to your honorable body the accompanying reports, embodying, as they do, facts which show the condition of the schools under the varying circumstances of locality.

ATTENDANCE.

The number of pupils enrolled during the year was 24,594—22,760 white and 1,834 colored. This is an increase of 784, or 3.2 per cent., over the number registered the preceding year.

The average enrollment was 20,477, being 715, or 3.6 per cent., in excess of that of the previous year.

The number of pupils in daily attendance was 19,022, being 812, or 4.4 per cent., greater than that of the preceding year.

The tables following explain themselves:

Enrollment of pupils in the several kinds and grades of schools for the school year ending June 30, 1889.

Normal School	40
High School	1,253
Grammar schools:	
Eighth grade	1,750
Seventh grade	2,123
Sixth grade	2,606
Fifth grade	3,026
Total	9,505

Primary schools:	
Fourth grade	3,466
Third grade	3,149
Second grade	3,149
First grade	4,032
Total	13,796
Grand total	24,594

SCHOOLS.

The number of schools below the High School was as follows:

Grammar schools, city:	
Eighth grade	32
Seventh grade	36
Sixth grade	45
Fifth grade	51
Total	164
Primary schools, city:	
Fourth grade	51
Third grade	49
Second grade	48
First grade	51
Total	199
County schools:	
White	30
Colored	32
Total	62
Grand total	425
Number of whole-day schools	297
Number of half-day schools	128
Total	425

The average number of pupils to a school (based on the whole enrollment) was as follows:

High School (to a teacher, excluding principal)	39.1
Grammar schools, city:	
Eighth grade	51.7
Seventh grade	52.0
Sixth grade	51.1
Fifth grade	53.1
Primary schools, city:	
Fourth grade	59.6
Third grade	53.0
Second grade	52.5
First grade	61.5
County schools:	
White	54.0
Colored	57.3

TEACHERS.

Four hundred and ninety-one teachers were employed, as follows:

Supervising principals	6
Normal School	5
High School	33
Grammar schools, city:	
Eighth grade	32
Seventh grade	36
Sixth grade	45
Fifth grade	51
Total	164
Primary schools, city:	
Fourth grade	52
Third grade	47
Second grade	46
First grade	49
Total	194
County schools:	
White	30
Colored	3
Total	63
Teachers of music	2
Teachers of drawing	3
Teachers of manual training	9
Teachers of cookery	6
Teachers of sewing	6
Total	491

The cost of the schools for supervision and teaching was as follows:

Supervision:		
Superintendent	$2,700	
Clerk	1,200	
Messenger	300	
Six supervising principals	12,000	
Total		$16,200.00
Cost per pupil (estimated on average enrollment, 20,477)		.79
Normal School:		
Principal	$1,500	
Two teachers	2,000	
Two teachers	1,500	
		*5,000.00
Cost per pupil (estimated on average enrollment, 40)		51.98
High School:		
Principal	$2,500	
Thirty-two teachers	26,095	
		28,595.00
Cost per pupil (estimated on average enrollment) 1,107		25.83

*This includes the cost of teaching six practice schools, $2,920.84.

Grammar schools, city (32 eighth, 36 seventh, 45 sixth, 51 fifth grade schools)	131,746.43
Cost per pupil (estimated on average enrollment, 7,364)	17.89
Primary schools, city (52 fourth, 49* third, 48* second, 51* first grade schools)	†101,811.80
Cost per pupil (estimated on average enrollment, 9,361)	11.18
County schools:	
White schools	20,050.00
Colored schools	19,101.53
Cost per pupil (estimated on average enrollment):	
White (1,224)	16.38
Colored (1,381)	13.83
Special teachers (2 music teachers and 3 drawing teachers)	4,925.00
Cost per pupil (estimated on average enrollment, 20,477)	.24
Teachers of manual training schools (of carpentry 8, of metal working 1, of cookery 6, of sewing 6)	13,360.00
Cost per pupil (estimated on whole enrollment, 7,376)	1.81
Cost per pupil for tuition in all the schools, including manual training (based on average enrollment, 20,477)	15.85

For your convenience, the convenience of the honorable Commissioners, and that of members of Congress, I here insert statements showing the attendance, number and distribution of teachers, cost of tuition, and other necessary and interesting items for all the schools of the District of Columbia. These have been obtained by uniting the facts presented by Superintendent Cook of the colored schools with those presented above.

Attendance.

	White.	Colored.	Total.
Whole enrollment	22,760	13,004	35,764
Increase	706	208	914
Per cent. of increase	3.2	1.6	2.6
Average enrollment	19,096	10,469	29,565
Increase	715	297	1,012
Per cent. of increase	3.8	2.9	3.5
Average daily attendance	17,766	9,853	27,619
Increase	792	315	1,107
Per cent. of increase	4.6	3.3	4.1

*Two of these schools were taught by normal pupils.

†To be increased by the cost of teaching six practice schools, $2,920.84.

The following tables explain themselves:

Whole enrollment of pupils in the several kinds and grades of schools for the school year ending June 30, 1889.

	White.	Colored.	Total.
Normal schools	40	40	80
High schools	1,253	416	1,669
Total	1,293	456	1,749
Grammar schools, city:			
Eighth grade	1,656	269	1,925
Seventh grade	1,873	314	2,187
Sixth grade	2,302	629	2,931
Fifth grade	2,713	799	3,512
Total	8,544	2,011	10,555
Primary schools, city:			
Fourth grade	3,040	1,000	4,040
Third grade	2,599	1,446	4,045
Second grade	2,523	2,007	4,530
First grade	3,140	4,250	7,390
Total	11,302	3,703	20,005
County schools	1,621	1,834	3,455
Grand total	22,760	13,004	35,764

SCHOOLS.

The number of schools below the high schools was as follows:

	White.	Colored.	Total.
Grammar schools, city:			
Eighth grade	32	7	39
Seventh grade	36	8	44
Sixth grade	45	14	59
Fifth grade	51	17	68
Total	164	46	210
Primary schools, city:			
Fourth grade	51	20	71
Third grade	49	28	77
Second grade	48	37	85
First grade	51	48	99
Total	199	133	332
County schools	30	32	62
Grand total	393	211	604
Number of whole-day schools	273	115	388
Number of half-day schools	120	96	216
Total	393	211	604

The average number of pupils to a school (based on the whole enrollment) was as follows:

	White.	Colored.	Total.
High schools (to a teacher, excluding principals)	39.1	37.8	38.8
Grammar schools, city:			
Eighth grade	51.7	38.4	49.3
Seventh grade	52.0	39.2	49.7
Sixth grade	51.1	44.8	49.6
Fifth grade	53.1	47.0	51.6
Primary schools, city:			
Fourth grade	59.6	50.0	56.9
Third grade	53.0	51.6	52.5
Second grade	52.5	55.7	53.9
First grade	61.5	88.5	74.6
County schools	54.0	57.3	55.7

TEACHERS.

Six hundred and ninety-three teachers were employed, as follows:

	White.	Colored.	Total.
Supervising principals	6	2	8
Normal schools	5	5	10
High schools	33	11	44
Grammar schools, city:			
Eighth grade	32	7	39
Seventh grade	36	8	44
Sixth grade	45	14	59
Fifth grade	51	17	68
Total	164	46	210
Primary schools, city:			
Fourth grade	52	20	72
Third grade	47	27	74
Second grade	46	35	81
First grade	49	46	95
Total	194	128	322
County schools	30	33	63
Teachers of music	2	2	4
Teachers of drawing	3	1	4
Teachers of manual training	9	3	12
Teachers of cookery	6	2	8
Teachers of sewing	6	2	8
Grand total	458	235	693

The cost of the schools for supervision and teaching was as follows:

	White.	Colored.	Total.
Supervision:			
One superintendent	$2,700.00	$2,250.00	$4,950.00
Six supervising principals, each $2,000	12,000.00	.....	12,000.00
Two supervising principals, each $2,000	.....	4,000.00	4,000.00
One clerk	1,200.00	800.00	2,000.00
One messenger	300.00	200.00	500.00
Total	16,200.00	7,250.00	23,450.00
Cost per pupil (estimated on average enrollment)	.79	.79	.79
Tuition:			
Normal schools:			
Principals	1,500.00	1,500.00	3,000.00
Two teachers	2,000.00	1,650.00	3,650.00
Two teachers	1,500.00	1,350.00	2,850.00
Total	*5,000.00	†4,650.00	9,650.00
Cost per pupil (based on average enrollment)	51.98	50.50	.....
High schools:			
Principal	2,500.00	1,800.00	4,300.00
Thirty-two teachers	26,095.00	.....	26,095.00
Ten teachers	.....	8,930.00	8,930.00
Total	28,595.00	10,730.00	39,325.00
Cost per pupil (estimated on average enrollment)	25.23	32.12	.....
Grammar schools, city:			
32 eighth, 36 seventh, 45 sixth, 51 fifth grades	131,746.43	.....	131,746.43
7 eighth, 8 seventh, 14 sixth, 17 fifth grades	.....	36,060.00	36,060.00
Total	131,746.43	36,060.00	167,806.43
Cost per pupil (estimated on average enrollment)	17.89	16.51	.....
Primary schools, city:			
52 fourth, 49 third, 48 second, 51 first grades	101,811.80	.....	101,811.80
20 fourth, 28 third, 36 second, 48 first grades	.....	64,925.00	64,925.00
Total	101,811.80	64,925.00	166,736.80
Cost per pupil (estimated on average enrollment)	11.18	9.94	.....
Special teachers:			
2 music teachers and 3 drawing teachers	4,925.00	.....	4,925.00
2 music teachers and 1 drawing teacher	.....	2,710.00	2,710.00
Total	4,925.00	2,710.00	7,635.00
Cost per pupil (estimated on average enrollment)	.24	.30	.....
Manual training:			
Carpentry, 8; metal working, 1; cookery, 6; sewing, 6	13,360.00	.....	13,360.00
Carpentry, 2; metal working, 1; cookery, 2; sewing, 2	.....	4,765.00	4,765.00
Total	13,360.00	4,765.00	18,125.00
Cost per pupil (estimated on average enrollment)	1.81	1.91	.....
County schools:			
30 teachers	20,050.00	.....	20,050.00
33 teachers	.....	19,101.53	19,101.53
Total	20,050.00	19,101.53	39,150.53
Cost per pupil (estimated on average enrollment)	16.38	13.83	.....

Average cost per pupil for tuition in all the schools (estimated on average enrollment) $15.94

*This includes the cost of teaching six practice schools, $2,920.84.

†This includes the cost of teaching five practice schools, $2,374.

REMARKS AND SUGGESTIONS.

ACCOMMODATIONS.

Congress has provided liberally for the erection, extension, and improvement of school buildings during the last three years.

Most of our schools are taught on full time. Very few schools above the second grade have been restricted to half-day time. This has been gratifying. A marked improvement in the character of our schools has been the result. If this liberality is continued for one or two years more our accommodations will be adequate, all that can be desired, after which we shall need only to provide for the annual increase or growth.

It should be remembered, however, that, in making our present estimate, we must consider the wants of 39,000 children. We ought also to consider especially the probable growth of portions of the city or District not now provided with schools.

The following schools will be needed by the time they can be appropriated for and built (if the city continues to grow) to prevent the extension of half-day schools into the third and fourth grades:

An eight room building in each of the first, second, third, and fourth divisions, a six or eight room house at Eckington or Brooks, an eight-room building at Anacostia, which could be erected on the lot now owned by the District.

THE HIGH SCHOOL.

Provision must be made for the accommodation of children attending the High School. The annex now building will no more than meet the present demands. After the addition is completed and the then new High School occupied, our accommodations for High School pupils will be exhausted.

I respectfully suggest that the present High School is large enough, if, indeed, it is not already too large. It is not practicable, perhaps, to establish other co-ordinate high schools. I do not believe it desirable. The plant for such a school is expensive. It is always expensive to manage such a plant, as only experts can manage it profitably.

The limitations in salaries insisted upon by Congress make it impossible for us to employ the number of experts required for more than one high school. I believe, however, that the solution of this question is easy and practicable. The first year's work of the present High School might be done advantageously, perhaps more profitably than it is now done, in the respective localities where these children live. Plants for these auxiliary high schools, or local high schools, or division high schools, would not be expensive. This first year's work is:

Year.	Academic.	Scientific.	Business.
First	English	English	English.
	History	History	History.
	Algebra	Algebra	Algebra.
	Latin	German	Book-keeping and business arithmetic.
	Physiology, Physical geography — Lectures.	Physiology, Physical geography — Lectures.	Physiology, Physical geography — Lectures.

The work of this year can be done without much apparatus. The science work is that which nature affords, and is better studied in the field or fresh from the field than in any other place or under any other conditions. The work in mathematics requires no apparatus. The work in English, which should be emphasized and extended, requires only such libraries as we are now trying to furnish for our eighth grade schools.

Two or three such schools might be opened another year in buildings now owned.

The advantages and disadvantages of this scheme I will not here discuss. I present the question as one that demands solution for the immediate future, and refer you, with gratification, to remarks on the same subject by Supervising Principals Stuart and Janney, a part of this report.

ATTENDANCE.

The attendance upon the schools during the year was good. The increased attendance in the first six divisions was peculiar in that it was confined almost wholly to the upper grades, the increases or decreases being as follows:

Grades.	Whole enrollment.			
	1888-'89.	1887-'88.	Increase.	Decrease.
Normal School	40	40	.....	.....
High School	1,253	997	256	.....
Total	1,293	1,037	256	.....
Grammar schools:				
Eighth grade	1,750	1,576	174	.....
Seventh grade	2,123	1,905	218	.....
Sixth grade	2,606	2,457	149	.....
Fifth grade	3,026	3,041	.....	15
Total	9,505	8,979	541	15
Primary schools:				
Fourth grade	3,466	3,329	137	.....
Third grade	3,149	3,250	.....	101
Second grade	3,149	3,197	.....	48
First grade	4,032	4,018	14	.....
Total	13,796	13,794	151	149
Grand total	24,594	23,810	948	164

I am unable to account for the fact that the increased attendance was almost wholly in the upper grades of the schools, that is, in the grammar grades and the High School. It could not have been because of the crowded condition of schools of lower grade compared with that of upper grades, nor could it have been due to inconvenience of location of the lower-grade schools. Nor was it because the lower-grade schools received less care and attention on the part of the supervising corps than those of the upper grades, for the facts were quite the contrary. Perhaps it was a mere accident of conditions which may be reversed another year.

I think, however, that the half-day system obtaining wholly in the primary schools is, in part, the reason for the relative small enrollment. I believe more firmly, year by year, that we should seek strenuously to provide a school-room for each school and a seat for each pupil presenting himself for instruction, to the end that the daily sessions of the primary schools may be lengthened. It may not be wise—I think it would not be wise—to give them full time. Our school-rooms are clean, well ventilated, and healthful; our school exercises are interesting, diversified, and health-giving. Short sessions induce didactic teaching and "cramming;" longer time gives opportunity for correct teaching and healthful training. There are no valid arguments for half-day schools. There are many reasons why the children should be in school longer each day.

I respectfully suggest the propriety of extending the school day of the primary schools to four and a half hours, of two sessions. These schools might begin at half past 9 o'clock, taking the ordinary noon recess from 12 to 1, and close at 3, with the other grades.

If it is thought unwise to extend the time of all the primary schools, I respectfully suggest that it be made lawful for the superintendents, with the advice of the supervising principal and the consent of the local trustee, to extend the time of any school. I make this last suggestion because, in my visits, I frequently find school-rooms closed, the children having been sent home after the prescribed school day, where I am confident the children would be better off to return to be trained more and taught more. This is especially true in some of the schools of the county.

Many of the children belonging to these schools will attend school but one, two, or three years at most. Some of them are more than six years of age when they enter school. It is not an uncommon thing to find children in the rural schools eight or ten years old, in the first grade, making their first attempt at learning to read. Such pupils require more time and attention. It would be eminently wise, in my judgment, to give them more time and attention by increasing the length of the school day. I believe, also, that most parents interested would be gratified by this ruling.

TRUANCY.

I take the liberty to renew the suggestion made last year that a truancy officer be appointed to ascertain who do not attend school and why they do not attend school, to the end that the benefits of the schools may reach all for whom they are designed.

TEXT-BOOKS.

The consideration of school attendance suggests the question of text-books for the children.

According to the rules of the Board, text-books are now loaned to children whose parents request the same. This request, however, is to be accompanied by a declaration that he who makes it is unable to furnish the text-books for his children. Many worthy persons, unfortunately situated, naturally dislike to make such statement or declaration. For this reason there is no doubt that many children are detained from school for weeks or months at a time, and that others are wholly deprived of the privileges of school.

It were folly to say that this need not be so. The condition exists; the children are not in school. They should be. Their education is demanded by the interests of the community.

Again, many children are withdrawn from school before they would be if their parents were able to furnish the books required by their advancement and promotion. A large number of children, therefore, get only a modicum of education. The interests of the state demand a broader learning and a more thorough disciplining than these children get.

Again, there is much waste to the community at large in the purchase of text-books by individuals, as many of these books are used but for a short time, and being of little or no value as library books, are destroyed or thrown aside.

To prevent this unnecessary outlay, and, what is infinitely more important to the State, to insure a desirable minimum education of every child, I believe the State should furnish the text-books as well as the instruction.

I respectfully recommend that the Board of Trustees request the honorable Commissioners to ask of Congress an appropriation for the purchase of text-books to be used in our schools.

Many school districts, many cities, and several States of the Union now furnish text-books for their schools, so the subject is not a new one.

The additional expense of furnishing text-books to the community will be relatively small, being less than a dollar per scholar per annum after the first year. The outlay the first year will be necessarily greater than this.

The American community is more interested to-day in having every child benefited by its schools than it is in having the character of its schools improved. Not how high shall we take our schools nor how broad shall we make our courses of instruction, but how may every

child be reached and be made a safer and better member of the community, is the problem to be solved. Any movement or instrumentality that reaches down and uplifts will give value to the school system and compensation to the tax-payer.

SCHOOL WORK.

The work of the year was, in many respects, gratifying, though not as good as could be wished. For a knowledge of the results I respectfully call your attention to the opinions of the supervisors and principals, as set forth in their reports to me, herewith appended.

The supervision of the schools is so organized that the heads of the various departments and divisions of the schools are caused to understand the purposes and limitations of the different kinds of work prescribed by the Board of Trustees. They are caused to estimate the possibilities of the school under the varying circumstances of locality, size of schools, power of teacher, change of teachers, fluctuating attendance incident to the state of the weather, epidemic diseases and other causes, and, bearing these in mind, to study carefully the progress made and compare the same with the requirements of the course of instruction and report their conclusions with reasons for the same.

These investigations are made with a unity of purpose and a broad, intelligent, catholic, and coöperative spirit most gratifying and that gives strength and efficiency to the supervision.

The opinions of these men and women set forth the conditions of the schools in such a way that he who reads them may know what we try to do, how we think we succeed, and how much better we would like to succeed.

HEALTH EXERCISES.

The decision of the trustees to give to the schools systematic training in health exercises is no doubt a wise one.

The arrangement of a course of health exercises may safely be left to growth under wise care, much investigation and something of experiment. Perhaps no one system now known is either practicable in the public schools or desirable for the American citizen.

We train men for different purposes in life from most other nations. The man in the American community is a unit whose relations to the State differ widely from the relations of the man whose State requires of him a number of the best years of his life in military service.

Not great strength, abnormal development, but good health, elasticity, symmetrical development, are desirable. Some exercises from the German system, some from the Swedish system, some from the many American systems may be united as experiment and experience may dictate.

MANUAL TRAINING.

The introduction of manual training has caused some change in school management. It is the consensus of opinion, almost unanimous, that a decided advantage has been gained by this innovation. All

concede that no academic loss has been sustained; the majority agree that a positive, appreciable gain has been made in the academic studies. A few are disturbed by the interruption of time-honored programs, while the majority report no inconvenience from this source, and report increased love of school, increased interest in all studies, better appreciation of what is taught and why it is taught, better understanding of the relation between what is taught and the affairs of life, and resulting therefrom, broader and more intelligent grasp and constantly greater cheerfulness and less disposition to consider the school as a place for tasks, and the teacher as a taskmaster.

When it is considered how small relatively is the increased expense to our schools, it must be conceded that the above enumerated results amply repay the community for all expense and the school authorities for all the trouble incident to the incorporation of manual training with the school work of the child.

The educative value of creating, the causing of something to be that takes form with related parts, that has value, that is made for a purpose that is clearly seen, compared with the educative value of lesson-learning, need not be discussed. Both are valuable; neither is enough. Each is made more valuable by the help of the other.

In spite of all efforts, and they have been legion, to make schools other than places for conning lessons, such has ever been their prevailing characteristic. The introduction of scientific studies by scientific processes has changed not only the methods of work but also the purpose of work in most of the leading colleges and universities of the land. The introduction of the kindergarten, with its processes, has changed not only the methods but the purpose of primary instruction.

It is needless to say that the kindergarten methods and the scientific university methods are the same in principle. While these two innovations have made such radical changes in the two extremes of our educational systems, comparatively little improvement has been made in the teaching of those grades of schools lying between these two extremes.

It is true that, to some extent, high schools have been affected by the work done above them; intermediate schools have been affected by the work done below them. These results have been adventitious. The great mass of intermediate schools to-day are authoritative and didactic on the part of the teaching, unchallenged and *memoriter* on the part of the learning.

We have found that manual training, connected as it is with all grades of our schools, related as it is to almost every branch of study pursued, has changed the processes of teaching and given the teacher a new and better purpose of instruction, has changed the process of learning, and given the pupil, at every step in his work, an intelligent and tangible purpose for such work. Thus to-day does the work of our schools in all grades more nearly correspond to that of the university or the kindergarten, differing only in grade.

Another year it will be possible to extend the sewing, the cooking, and the shop-work into the suburban schools, and give to them all the advantages afforded in the city schools.

Since my last report a course of cooking for the high school has been developed and tried. It is as follows:

COURSE IN COOKING FOR THIRD YEAR.

A. *Soups.*—Make any four of the following-named soups: (1) Bouillon; (2) Consommé; (3) Mullagatawny; (4) Game; (5) Mock turtle; (6) Gumbo or okra; (7) Noodle.

B. *Meats.*—(1) Fish: *a* Boil lobster, *b* Devil lobster or crab, *c* Make clam chowder. (2) Fowl: *a* Pick and draw, *b* Stuff and roast, *c* Make gravy, *d* Bone and steam chicken, *e* Fricassee chicken, *f* Fry chicken, *g* Broil chicken. (3) Game: *a* Roast wild duck, *b* Make rabbit pie. (4) Stew kidneys. (5) Broil sweetbreads.

C. *Salads.*—Make any two of the following-named salads: (1) Chicken; (2) Lobster; (3) Oyster; (4) Celery.

D. *Desserts.*—Make the following: (1) Orange jelly; (2) Orange charlotte; (3) Charlotte russe; (4) Bavarian cream; (5) Plum-pudding and sauce.

E. *Cake.*—Make the following: (1) Angel; (2) Fruit; (3) Scotch tea cake; (4) Wafers.

F. *Pickle.*—Make any two of the following-named pickles: (1) Cucumber; (2) Mixed; (3) Chow-chow; (4) Oysters. Make any one of the following: (4) Spice vinegar; (5) Celery vinegar; (6) Raspberry vinegar. Make each of the following: (7) Tomato catsup; (8) Sweet pickled cherries.

G. *Canning.*—Fruits and vegetables in their respective seasons.

H. *Preserving.*—Fruits in their respective seasons.

I. *Jelly.*

J. *Dishes for the sick.*—Make the following: (1) Gruel: *a* Arrowroot, *b* Barley, *c* Oatmeal, *d* Milk Porridge. (2) Drinks: *a* Toast water, *b* Rice water, *c* Barley water, *d* Beef tea or beef jelly, *e* Mutton broth, *f* Calves' feet jelly or broth, *g* Laban or koumiss, *h* Acid drinks. (3) Boil beef pulp; (4) Boil chicken; (5) Make milk toast; (6) Make Irish moss jelly; (7) Teach the serving of oranges and other fruits.

Remarks.

In teaching this course, such combinations of dishes as will supplement one another should be made to the extent that time will permit, such as boiled lobster and lobster salad or deviled lobster; steamed chicken and chicken salad; angel cake and orange charlotte.

Many of the lessons in pickling will of necessity come directly after the opening of school, in the fall of the year.

If time will permit, give two lessons on each of the subjects, preserving and canning, making judicious selection of any fruits in season.

Teach canning in the fall and preserving and jelly-making in the spring of the year.

Broiled chicken should be taught in the spring of the year; partridges may be substituted for chicken in the fall. Other lessons on chicken should be given in the fall or early winter.

Broiled sweetbreads should be taught when they are least expensive.

Carving and serving dishes will be taught when the respective articles are cooked. Other lessons on carving and serving will be given as they are found necessary.

From time to time during the course, the pupils should be led to make ménus for breakfast, dinner, lunch, or supper, combining the foods in such manner as to obtain the greatest amount of nourishment consistent with variety and economy.

NIGHT SCHOOLS.

The night schools were better attended during the past year than ever before, though the attendance fluctuates. This fluctuation impairs the value of these schools very greatly. If a wider range of subjects could be taught, thus giving a better choice of subjects, the attendance would be greater in these schools.

It is not clear, however, how this change can be accomplished without materially increasing the expense of these schools. There is, nevertheless, no doubt that some forms of manual training may be advantageously introduced, such for instance as sewing and cooking. At least, however, an experiment in this direction might be made another year by the opening of one sewing school and one cooking school. If either or both should fail to succeed, the loss would be inconsiderable while the experience would be satisfying.

I believe also that an advanced grade of school should be opened for those who have attended so regularly during the past few years that they have practically completed the course thus far provided for them. I am led to this belief by frequent expressions of desire of such a grade on the part of many pupils, as also by many expressions of opinion on the part of teachers of night schools that a higher grade of work is now desirable. Should such a school be opened it should be centrally located, and permission given to pupils in all parts of the city to attend it.

The following table shows the attendance on these schools, as also the cost of the schools:

Schools.	Cost of teachers.	Whole enrollment.	Average attendance per night.	Percentage of attendance.	Number of sessions.	Number of teachers.
WHITE.						
Franklin	$453.00	222	69	68.7	57	4
Henry	446.50	200	63	59.7	57	4
Wallach	456.00	189	69	71.3	57	4
Jefferson	448.00	115	63	54.9	56	4
Curtis	161.50	40	8	66.6	54	1
Anacostia	146.50	32	12	60.0	49	1
Total	2,111.50	798	284	63.5	.....	18
COLORED.						
Hillsdale	247.50	68	47	86.5	56	2
Mott	341.00	118	66	81.8	55	3
Total	588.50	186	113	84.1	.....	5
Grand total	2,700.00	984	397	68.6	.....	23

SUPERVISION.

It is my duty to call your attention again to the fact that the supervision of the schools is inadequate. Diligent, conscientious, and efficient as our supervisors are, than whom there are no better, it is impossible for them to know as much about the schools as they should know with the great number they have to supervise. This number is increasing every year. It must follow that our supervision will become less perfect and less effective every year.

The relative amount of supervision of the Washington schools is astonishingly small, compared with the schools of other cities of like size. At least two additional supervisors are necessary in the first six divisions. The necessity is almost imperative. It may be desirable to assign one of the two to the supervision of primary instruction.

In the absence of relief by Congress, I beg to suggest the importance of detailing one or more persons now on the corps of teachers as assistant supervisors.

There is no thing now more urgently needed than increased facilities for knowing what the schools are doing.

During the year a course of lectures was given to the teachers of the District in the hall of the Washington High School, the first one of which was by Mr. H. E. Holt, director of music of the public schools of Boston. This was followed by a series of university lectures on American History. The outlines of such lectures, which are valuable for reference, appear elsewhere in this report (see page 46).

I have the honor to subscribe myself,
Yours, very respectfully,

W. B. POWELL,
Superintendent of Schools.

WASHINGTON, D. C., *November* 1, 1889.

STATISTICS.

SCHOOL ACCOMMODATIONS.

Buildings and rooms occupied (owned and rented) in the first six divisions at the close of the school year ending June 30, 1889 (excluding the Washington High School).

	First division.	Second division.	Third division.	Fourth division.	Fifth division.	Sixth division.	Total.
Buildings owned	6	9	11	5	4	22	57
Buildings rented	*4	†3	*3	.....	4	2	16
Total	10	12	14	5	8	24	73
Rooms owned	65	89	78	‡44	‡28	56	360
Rooms rented	§10	†12	‖6	.....	7	3	38
Total	75	101	84	44	35	59	398

Total number of schools, 425.

* Including one (1) for manual training and cooking schools.
† Used for manual training and cooking schools.
‡ Including one (1) for cooking school.
§ Including three (3) for manual training and cooking schools.
‖ Including two (2) for manual training and cooking schools.

Buildings and rooms occupied (owned) in the first six divisions at the beginning of the school year ending June 30, 1890 (excluding the Washington High School).

	First division.	Second division.	Third division.	Fourth division.	Fifth division.	Sixth division.	Total.
Buildings owned	8	10	10	6	5	22	61
Rooms owned	80	*97	*82	*50	*36	58	403

Total number of schools (estimated) 440.

* Including one (1) for cooking school.

TABLE I.—*Showing the whole enrollment of white pupils within the city, by grades, for the school year ending June 30, 1889.*

Grades.	Whole enrollment.			
	Boys.	Girls.	Total.	Per cent.
Normal school	1	39	40	19
High school	547	706	1,253	5.93
Eighth grade	661	995	1,656	7.83
Seventh grade	780	1,093	1,873	8.86
Sixth grade	978	1,324	2,302	10.89
Fifth grade	1,323	1,390	2,713	12.83
Fourth grade	1,547	1,493	3,040	14.38
Third grade	1,325	1,274	2,599	12.30
Second grade	1,355	1,168	2,523	11.94
First grade	1,663	1,477	3,140	14.85
Total	10,180	10,959	21,139	100.00
SUMMARY.				
Normal and High schools	548	745	1,293	6.12
Grammar schools	3,742	4,802	8,544	40.41
Primary schools	5,890	5,412	11,302	53.47
Total	10,180	10,959	21,139	100.00

TABLE II.—*Showing the whole enrollment of white pupils in the first six divisions (city and county), by grades, for the school year ending June 30, 1889.*

Grades.	Whole enrollment.			
	Boys.	Girls.	Total.	Per cent.
Normal school	1	39	40	.17
High school	547	706	1,253	5.51
Eighth grade	684	1,028	1,712	7.52
Seventh grade	824	1,158	1,982	8.71
Sixth grade	1,038	1,397	2,435	10.70
Fifth grade	1,388	1,465	2,853	12.53
Fourth grade	1,637	1,600	3,237	14.22
Third grade	1,444	1,414	2,858	12.56
Second grade	1,493	1,327	2,820	12.39
First grade	1,868	1,702	3,570	15.69
Total	10,924	11,836	22,760	100.00
SUMMARY.				
Normal and High schools	548	745	1,293	5.68
Grammar schools	3,934	5,048	8,982	39.46
Primary schools	6,442	6,043	12,485	54.86
Total	10,924	11,836	22,760	100.00

TABLE III.—*Showing the whole enrollment of pupils (white and colored) in the first six divisions (city and county), by grades, for the school year ending June 30, 1889.*

Grades.	Whole enrollment.			
	Boys.	Girls.	Total.	Per cent.
Normal school	1	39	40	.16
High school	547	706	1,253	5.10
Eighth grade	701	1,049	1,750	7.12
Seventh grade	890	1,233	2,123	8.63
Sixth grade	1,117	1,489	2,606	10.60
Fifth grade	1,468	1,558	3,026	12.30
Fourth grade	1,743	1,723	3,466	14.09
Third grade	1,583	1,566	3,149	12.80
Second grade	1,649	1,500	3,149	12.80
First grade	2,081	1,951	4,032	16.40
Total	11,780	12,814	24,594	100.00
SUMMARY.				
Normal and High schools	548	745	1,293	5.26
Grammar schools	4,176	5,329	9,505	38.65
Primary schools	7,056	6,740	13,796	56.09
Total	11,780	12,814	24,594	100.00

TABLE IV.—*Showing attendance and other facts.*

SEPTEMBER.

	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Percentage of attendance.	Schools.	Teachers employed.	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Pupils to a school based on— Whole enrollment.	Pupils to a school based on— Average enrollment.
First division	3,711	3,637	3,412	97.6	*82	†80	123	.....	.....	45.2	44.3
Second division	5,230	4,775	4,664	97.4	*100	†98	147	1	1	52.3	47.7
Third division	4,550	4,272	4,141	97.6	93	†94	60	.....	.....	48.9	45.9
Fourth division	2,516	2,387	2,304	97.0	50	†51	42	.....	.....	50.3	47.7
Fifth division	1,660	1,546	1,493	96.4	37	†39	94	.....	.....	44.8	41.7
Sixth division:											
White	1,398	1,319	1,267	96.0	30	†31	91	1	.....	46.6	43.9
Colored	1,484	1,355	1,316	96.8	32	33	55	4	.....	46.3	42.3
High school	1,189	1,161	1,152	99.1	.....	33	20	.....	.....	.....	.....
Normal school	40	39	39	98.7	....	5	1	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	25	.....	.....	.....	.....	.....
Total	21,778	20,491	19,788	.....	424	489	633	6	1	.....	.....

* Including three practice schools. † Including one supervising principal.

OCTOBER.

First division	3,995	3,745	3,589	95.4	*83	†81	581	2	1	48.1	45.1
Second division	5,249	5,024	4,797	95.5	*100	†98	568	3	4	52.4	50.2
Third division	4,778	4,487	4,295	95.7	93	†94	252	.....	3	51.3	48.2
Fourth division	2,583	2,465	2,338	94.9	50	†51	225	1	.....	51.6	49.3
Fifth division	1,753	1,653	1,567	94.7	37	†39	222	1	....	47.3	44.6
Sixth division:											
White	1,490	1,409	1,298	92.0	30	†31	252	.....	.....	49.6	46.9
Colored	1,580	1,518	1,419	93.4	32	33	142	7	2	49.3	47.4
High school	1,217	1,112	1,048	97.2	.....	33	91	.....	.....	.....	.....
Normal school	40	40	40	99.8	.....	5	2	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	22,685	21,453	20,391	.....	425	491	2,335	14	10	.....	.....

* Including three practice schools. † Including one supervising principal.

TABLE IV.—*Showing attendance and other facts*—Continued.

NOVEMBER.

	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Percentage of attendance.	Schools.	Teachers employed.	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Pupils to a school based on— Whole enrollment.	Pupils to a school based on— Average enrollment.
First division	3,990	3,828	3,610	94.1	*83	†81	500	.....	.....	48.0	46.1
Second division	5,169	4,979	4,673	93.8	*100	†98	531	2	.....	51.6	49.7
Third division	4,702	4,482	4,061	94.4	93	†94	226	1	.....	50.5	48.1
Fourth division	2,549	2,427	2,273	93.6	50	†51	280	1	.....	50.9	48.5
Fifth division	1,758	1,653	1,549	91.7	37	†39	300	2	.....	47.5	44.6
Sixth division:											
White	1,468	1,378	1,220	88.5	30	†31	226	.....	1	48.9	45.9
Colored	1,618	1,518	1,387	91.4	32	33	164	4	.....	50.5	47.4
High school	1,210	1,179	1,144	97.0	.....	33	111	.....	.....	.....	.....
Normal school	40	40	40	99.3	.....	5	4	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	22,504	21,484	19,957	.....	425	491	2,432	10	1	.....	.....

*Including three practice schools. † Including one supervising principal.

DECEMBER.

First division	3,957	3,688	3,428	93.4	*83	†81	493	.....	.....	47.6	44.4
Second division	5,087	4,888	4,543	93.1	*100	†98	429	2	1	50.8	48.8
Third division	4,584	4,315	4,056	93.9	93	†94	203	1	1	49.2	46.3
Fourth division	2,616	2,385	2,227	93.4	50	†51	200	.....	.....	52.3	47.7
Fifth division	1,708	1,629	1,502	9[illegible].3	37	†39	232	.....	.....	46.1	44.0
Sixth division:											
White	1,421	1,335	1,195	88.7	30	†31	210	1	.....	47.3	44.5
Colored	1,567	1,454	1,294	89.0	32	33	149	3	.....	48.9	45.4
High school	1,193	1,148	1,099	95.7	.....	33	102	.....	.....	.....	.....
Normal school	40	40	39	98.5	.....	5	4	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	22,173	20,882	20,383	.....	425	491	2,022	7	2	.....	.....

* Including three practice schools. † Including one supervising principal.

JANUARY.

First division	4,006	3,800	3,553	93.5	*83	†81	730	1	.....	48.2	45.7
Second division	5,180	4,928	4,603	93.4	*100	†98	692	4	.....	51.8	49.2
Third division	4,681	4,410	4,162	94.3	93	†94	270	.....	3	50.3	47.4
Fourth division	2,565	2,442	2,284	93.5	50	†51	317	.....	.....	51.3	48.8
Fifth division	1,763	1,655	1,532	92.5	37	†39	306	.....	1	47.6	44.7
Sixth division:											
White	1,426	1,322	1,182	89.1	30	†31	301	.....	2	47.5	44.0
Colored	1,586	1,382	1,268	91.6	32	33	154	12	1	49.5	43.1
High school	1,186	1,133	1,089	96.1	.....	33	106	.....	.....	.....	.....
Normal school	40	40	39	97.8	.....	5	6	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	22,433	21,112	19,712	.....	425	491	2,882	17	7	.....	.....

*Including three practice schools. † one supervising principal.

TABLE IV.—*Showing attendance and other facts*—Continued.

FEBRUARY.

	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Percentage of attendance.	Schools.	Teachers employed.	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Pupils to a school based on— Whole enrollment.	Pupils to a school based on— Average enrollment.
First division	3,934	3,644	3,353	91.8	*83	†81	589	.....	1	47.3	43.9
Second division	5,113	4,820	4,459	92.5	*100	†98	581	4	.....	51.1	48.2
Third division	4,585	4,320	4,040	93.6	93	†94	248	1	.....	49.3	46.4
Fourth division	2,524	2,426	2,284	93.6	50	†51	265	.....	.....	50.4	48.5
Fifth division	1,723	1,594	1,462	91.6	37	†39	230	1	.....	46.5	43.0
Sixth division:											
White	1,376	1,277	1,122	87.3	30	†31	273	.....	.....	45.8	42.5
Colored	1,512	1,393	1,266	90.5	32	33	163	3	.....	47.2	43.5
High school	1,152	1,126	1,076	95.5	.....	33	75	.....	.....	.....	.....
Normal school	40	40	39	97.2	.....	5	.....	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	21,959	20,640	19,101	.....	425	491	2,424	9	1	.....	.....

*Including three practice schools. †Including one supervising principal.

MARCH.

First division	3,858	3,626	3,281	90.6	*83	†81	525	.....	.....	46.4	43.6
Second division	5,044	4,783	4,311	91.0	*100	†98	432	.....	1	50.4	47.8
Third division	4,534	4,314	3,982	92.2	93	†94	195	1	.....	48.7	46.3
Fourth division	2,512	2,392	2,194	92.0	50	†51	249	.....	.....	50.2	47.8
Fifth division	1,685	1,590	1,457	90.9	37	†39	220	.....	.....	45.5	42.9
Sixth division:											
White	1,369	1,240	1,055	85.3	30	†31	174	1	.....	45.6	41.3
Colored	1,434	1,318	1,186	89.8	32	33	115	3	.....	44.8	40.9
High school	1,140	1,108	1,042	94.0	....	33	114	.....	.....	.....	.....
Normal school	40	40	38	96.6	.....	5	.....	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	21,616	20,411	18,546	.....	425	491	2,024	5	1	.....	.....

*Including three practice schools. †Including one supervising principal.

APRIL.

First division	3,767	3,639	3,251	89.9	*83	†81	437	.....	.....	45.3	43.8
Second division	4,943	4,713	4,255	90.1	*100	†98	393	5	.....	49.4	47.1
Third division	4,523	4,214	3,654	91.4	93	†94	152	.....	2	48.6	45.3
Fourth division	2,471	2,363	2,153	91.4	50	†51	185	.....	.....	49.4	47.2
Fifth division	1,642	1,559	1,393	89.3	37	†39	172	3	.....	44.3	42.1
Sixth division:											
White	1,381	1,262	1,064	84.4	30	†31	175	2	.....	46.0	42.0
Colored	1,411	1,295	1,136	87.6	32	33	94	3	1	44.0	40.4
High school	1,115	1,066	1,007	94.4	.....	33	97	.....	.....	.....	.....
Normal school	40	40	39	98.2	.....	5	.....	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	21,293	20,151	17,952	.....	425	491	1,705	13	3	.....	.....

*Including three practice schools. †Including one supervising principal.

TABLE IV.—*Showing attendance and other facts*—Continued.

MAY.

	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Percentage of attendance.	Schools.	Teachers employed.	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Pupils to a school based on— Whole enrollment.	Pupils to a school based on— Average enrollment.
First division	3,655	3,552	3,173	91.1	*83	†81	636	.....	.....	44.0	42.7
Second division	4,789	4,508	4,145	91.3	*100	†98	523	.....	.....	47.8	45.0
Third division	4,321	4,059	3,751	92.4	93	†94	170	.....	2	46.4	43.6
Fourth division	2,401	2,273	2,077	91.3	50	†51	198	.....	.....	48.0	45.4
Fifth division	1,598	1,495	1,353	90.5	37	†39	321	1	.....	43.1	40.4
Sixth division:											
White	1,320	1,208	1,023	84.4	30	†31	239	.....	1	44.0	40.2
Colored	1,342	1,246	1,102	88.3	32	33	99	.....	.....	41.9	38.9
High school	1,075	1,016	962	94.6	.....	33	130	.....	.....	.....	.....
Normal school	40	40	40	97.8	.....	5	3	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	20,541	19,397	17,626	.....	425	491	2,319	1	3	.....	.....

*Including three practice schools. †Including one supervising principal.

JUNE.

First division	3,665	3,552	3,170	91.7	*83	†81	636	.....	.....	44.1	42.7
Second division	4,526	4,353	4,075	93.6	*100	†98	246	.....	.....	45.2	43.5
Third division	4,080	3,968	3,754	94.5	93	†94	64	.....	.....	43.8	42.6
Fourth division	2,323	2,236	2,101	93.9	50	†51	90	.....	.....	46.4	44.4
Fifth division	1,514	1,457	1,356	93.1	37	†39	180	.....	.....	40.9	39.3
Sixth division:											
White	1,226	1,147	973	83.1	30	†31	117	3	.....	40.8	38.2
Colored	1,266	1,218	1,109	90.9	32	33	37	.....	.....	39.5	38.0
High school	1,034	1,021	979	95.9	.....	33	69	.....	.....	.....	.....
Normal school	40	40	40	99.0	.....	5	.....	.....	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
Total	19,674	18,992	17,557	.....	425	491	1,439	3	.....	.....	.....

*Including three practice schools. †Including one supervising principal.

TABLE V.—*Attendance, and other facts, by months for the year.*

	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Percentage of attendance.	Teachers employed.	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.
September	21,778	20,491	19,788	96.5	*489	633	6	1
October	22,685	21,453	20,391	95.0	*491	2,335	14	10
November	22,504	21,484	19,957	92.8	*491	2,432	10	1
December	22,173	20,882	20,383	97.6	*491	2,022	7	2
January	22,433	21,112	19,712	93.3	*491	2,882	17	7
February	21,959	20,640	19,101	92.5	*491	2,424	9	1
March	21,616	20,411	18,546	90.8	*491	2,024	5	1
April	21,293	20,151	17,952	89.0	*491	1,705	13	3
May	20,541	19,397	17,626	90.8	*491	2,319	1	3
June	19,674	18,992	17,557	92.4	*491	1,439	3	.....
	.....	.....	.....	.....	.....	20,215	85	29

* Including six supervising principals.

TABLE VI.—*Attendance and other facts, by divisions.*

	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Schools.	Teachers employed.	Pupils to a school based on—	
									Whole enrollment.	Average enrollment.
First division	4,402	3,665	3,395	5,340	3	2	*83	†81	53.0	44.1
Second division	5,647	4,784	4,460	4,542	21	7	*100	†98	56.4	47.8
Third division	5,120	4,305	4,036	1,840	4	11	93	†94	55.0	46.2
Fourth division	2,774	2,382	2,232	2,051	2	.....	50	†51	55.4	47.6
Fifth division	1,903	1,589	1,465	2,277	8	1	37	†39	51.4	42.9
Sixth division:										
White	1,621	1,224	1,088	2,058	8	4	30	†31	54.0	40.8
Colored	1,834	1,381	1,256	1,172	39	4	32	33	57.3	43.1
High school	1,253	1,107	1,060	915	.....	.....	.....	33	.....	.....
Normal school	40	40	39	20	.....	.....	.....	5	.....	.....
Special teachers	.....	.....	.....	.....	.....	.....	.....	26	.....	.....
Total	24,594	20,477	19,022	20,215	85	29	425	491	.....	.....

*Including three practice schools. †Including one supervising principal.

TABLE VII.—*Fluctuations in the growth of the schools since the year* 1880.

[First six divisions.]

School year ending June 30—	Whole enrollment.		Average enrollment.		Average daily attendance.		Number of teachers.	Increase.
	Number.	Per cent. of increase.	Number.	Per cent. of increase.	Number.	Per cent. of increase.		
1880	18,378	.....	15,027	.....	14,225	.....	306	.....
1881	19,153	4.2	15,494	3.1	14,388	1.1	327	21
1882	19,031	*.63	16,063	3.6	14,933	4.1	342	15
1883	19,836	4.2	16,524	2.8	15,451	3.4	358	16
1884	21,221	6.9	16,642	.71	15,423	*.18	371	13
1885	21,267	.21	17,468	4.9	16,041	4	393	22
1886	22,198	4.3	18,720	7.1	17,273	7.6	421	28
1887	23,073	3.9	19,285	3	17,910	3.6	438	17
1888	23,810	3.1	19,762	2.4	18,210	1.7	463	25
1889	24,594	3.2	20,477	3.6	19,022	4.4	491	38

*Decrease.

WASHINGTON HIGH SCHOOL.

TABLE VIII.—*Whole number of pupils enrolled, increase and percentage of increase for each year since the organization of the advanced grammar schools.*

Year.	Boys.			Girls.			Total.		
	Number enrolled.	Increase.	Percentage of increase.	Number enrolled.	Increase.	Percentage of increase.	Number enrolled.	Increase.	Percentage of increase.
1876–'77	.....	.....	.....	54	.....	.....	54	.....	.....
1877–'78	54	.....	.....	76	22	40.7	130	76	147.4
1878–'79	67	13	24.0	84	8	10.5	151	21	16.1
1879–'80	81	14	20.9	98	14	16.6	179	28	18.5
1880–'81	104	23	28.4	130	32	32.7	234	55	30.7
1881–'82	121	17	16.3	147	17	13.0	268	34	14.5
1882–'83	171	50	41.3	241	94	63.9	412	144	53.7
1883–'84	209	38	22.2	315	74	30.9	524	112	27.1
1884–'85	223	14	6.2	433	128	31.8	656	132	20.1
1885–'86	262	39	15.2	483	50	10.3	745	89	11.9
1886–'87	301	39	11.0	526	43	8.9	827	82	11.0
1887–'88	414	113	37.5	583	57	10.8	997	170	20.5
1888–'89	547	133	32.1	706	123	21.1	1,253	256	25.6

WHITE AND COLORED SCHOOLS.

GENERAL STATISTICS OF SCHOOLS FOR THE DISTRICT OF COLUMBIA FOR THE YEAR ENDING JUNE 30, 1889.

In the following tables the facts presented by Superintendent Cook and myself are summarized to give a general view of the several kinds of schools, showing attendance, number of teachers, cost, and other items of interest:

Washington Normal School.

Number of teachers trained	40
Average attendance	39
Number of teachers employed	5
Average salary	$1,000.00

Normal School of the Seventh and Eighth Divisions (colored).

Number of teachers trained	40
Average attendance	38
Number of teachers employed	5
Average salary	$879.00

Washington High School.

Number of pupils enrolled	1,253
Average enrollment	1,107
Average attendance	1,060
Per cent. of attendance	95.9
Average number of tardinesses per month	92
Number of pupils dismissed	0
Number of teachers employed	33
Average salary paid	$866.51
Cost of tuition per pupil (estimated on the average enrollment)	$25.83

High School of the Seventh and Eighth Divisions (colored).

Number of pupils enrolled	416
Average enrollment	334
Average attendance	311
Per cent. of attendance	92.9
Average number of tardinesses per month	13.2
Number of pupils dismissed	0
Number of teachers employed	11
Average salary paid	$975.45
Cost of tuition per pupil (estimated on the average enrollment)	$32.12

Grammar and primary schools.

	White.	Colored.	Total.
Number of pupils enrolled	21,467	12,548	34,015
Average enrollment	17,949	10,096	28,045
Average attendance	16,667	9,504	26,171
Per cent. of attendance	92.8	94.5	93.3
Average number of tardinesses per month	1,811	490	2,301
Number of pupils dismissed	25	12	37
Number of cases of corporal punishment	46	133	179
Number of teachers employed	388	207	595
Average salary paid	$653.62	$580.12	.....
Average number of pupils to a teacher (estimated on average enrollment)	46.2	48.7	.....
Cost of tuition per pupil (estimated on average enrollment)	$14.12	$11.89	.....
Number of pupils enrolled in all schools	22,760	13,004	35,764

SPECIAL TEACHERS.

Drawing	3	1	4
Music	2	2	4
Average salary paid:			
Drawing	$708.33	$1,100.00	.....
Music	1,400.00	805.00	.....
Average cost per pupil for special tuition (estimated on average enrollment)	*0.25	†0.30	.....

* First six divisions, excluding high school. † Seventh and eighth divisions.

SUPERVISION.

The cost of supervision was:

One superintendent (white)	$2,700.00
One superintendent (colored)	2,250.00
Six supervising principals (white), each $2,000	12,000.00
Two supervising principals (colored), each $2,000	4,000.00
One clerk	1,200.00
One clerk (colored)	800.00
One messenger	300.00
One messenger (colored)	200.00
Total cost of supervision	23,450.00
Average cost of supervision per pupil (estimated on average enrollment, 29,565)	0.79

Summary.

Total cost of instruction, including supervision	$487,455.52
Whole number of pupils enrolled	35,764
Average enrollment	29,565
Average daily attendance	27,619
Average cost of instruction, estimated on—	
1. Whole enrollment	13.62
2. Average enrollment	16.48
3. Average daily attendance	17.64

Contingent expenses.

Total amount expended	$22,499.30
Average amount per pupil (estimated on average enrollment)	.76

Fuel.

Total amount expended	22,000.00

Janitors.

Total amount expended	36,544.88

Average cost per pupil (including high and normal schools) for all expenses except repairs and permanent improvements:

1. On whole enrollment	16.24
2. On average enrollment	19.64
3. On average daily attendance	21.03

List of school-houses owned, with their respective locations, and with the number of rooms in each.

Divisions.	Names of buildings.	Locations of buildings.	Number of rooms.
1	Franklin	Thirteenth and K streets, northwest	15
1	Dennison	S street, between Thirteenth and Fourteenth streets, northwest	12
1	Force	Massachusetts avenue, between Seventeenth and Eighteenth streets, northwest.	12
1	Analostan	G street, between Twenty-first and Twenty-second streets, northwest.	12
1	Weightman	Twenty-third and M streets, northwest	8
1	Thomson	Twelfth street, between K and L streets, northwest	6
2	Gales	First and G streets, northwest	12
2	Henry	P street, between Sixth and Seventh streets, northwest	12
2	Webster	Tenth and H streets, northwest	12
2	Seaton	I street, between Second and Third streets, northwest	12
2	Twining	Third street, between N and O streets, northwest	8
2	Abbot	Sixth street and New York avenue, northwest	9
2	Morse	Fifth and R streets, northwest	8
2	Phelps	Vermont avenue, between T and U streets, northwest	8
2	Blake	North Capitol street, between K and L streets, northwest	8
3	Wallach	Pennsylvania avenue, between Seventh and Eighth streets, southeast.	12
3	Peabody	Fifth and C streets, northeast	12
3	Brent	Third and D streets, southeast	8
3	Blair	I street, between Sixth and Seventh streets, northeast	8
3	Maury	B street, between Thirteenth and Fourteenth streets, northeast	8
3	Towers	Eighth and C streets, southeast	8
3	Carberry	Fifth street, between D and E streets, northeast	8
3	Cranch	Twelfth and G streets, southeast	6
3	McCormick	Third street, between M and N streets, southeast	4
3		Seventh and G streets, southeast	2
3	Lenox	Ninth street, between K street and Virginia avenue, southeast	2
4	Jefferson	Sixth and D streets, southwest	20
4	Amidon	Sixth and F streets, southwest	8
4	Bradley	Thirteen-and-a-half streets, between C and D streets, southwest	8
4	Potomac	Twelfth street, between Maryland avenue and E street, southwest	4
4	Greenleaf	Four-and-a-half street, between M and N streets, southwest	4

List of school-houses owned, with their respective locations, etc.—Continued.

Divisions.	Names of buildings.	Locations of buildings.	Number of rooms.
5	Addison	P street, between Thirty-second and Thirty-third streets, northwest.	11
5	Curtis	O street, between Thirty-second and Thirty-third streets, northwest.	9
5		Twenty-eighth street, between M street and Olive avenue, northwest.*	4
5		Thirty-second and S streets, northwest	4
5	Threlkeld	Thirty-sixth street and Prospect avenue, northwest	4
6	Mott	Sixth street extended and Trumbull street	6
6	Anacostia	Washington street, between Fillmore and Pierce streets, Anacostia, D. C.	6
6	Hillsdale	Nichols avenue, Hillsdale, D. C	6
6	Mount Pleasant	County	4
6	Hamilton Road	do	4
6	Tennallytown	do	4
6	Grant Road	do	2
6	Brightwood	do	4
6	Soldiers' Home	do	2
6	Hamilton	do	2
6	Benning	do	2
6	Benning Road	do	2
6	Giesboro	do	2
6	Conduit Road	do	1
6	Chain Bridge Road	do	1
6	Brightwood	do	1
6	Columbia Road	do	2
6	Fort Slocum	do	1
6	Bunker Hill Road	do	1
6	Queen's Chapel Road	do	1
6	Anacostia Road	do	1
6	Burrville	do	1
7	Stevens	Twenty-first street, between K and L streets, northwest	19
7	Garnet	Tenth and U streets, northwest	12
7	Sumner	Seventeenth and M streets, northwest	10
7	Wormley	Prospect avenue, between Thirty-third and Thirty-fourth streets, northwest,	8
7	Magruder	M street, between Sixteenth and Seventeenth streets, northwest,	8
7	Chamberlain	East street, Georgetown	†8
8	Lincoln	Second and C streets, southeast	11
8	Randall	First and I streets, southwest	12
8	John F. Cook	O street, between Fourth and Fifth streets, northwest	11
8	Banneker	Third street, between K and L streets, northwest	8
8	Anthony Bowen	Ninth and E streets, southwest	8
8	Giddings	G street, between Third and Fourth streets, southeast	8
8	Lovejoy	Twelfth and D streets, northeast	6

* Used only a part of the year. † Only two of these rooms were occupied.

TABLE IX.—*Whole enrollment of colored pupils in the District of Columbia, by grades, for the school year ending June 30, 1889.*

Grades.	Whole enrollment.	Per cent.
Normal School	40	.31
High School	416	3.20
Eighth grade	307	2.36
Seventh grade	455	3.50
Sixth grade	800	6.15
Fifth grade	972	7.47
Fourth grade	1,229	9.45
Third grade	1,737	13.36
Second grade	2,336	17.96
First grade	4,712	36.24
Total	13,004	100.00
SUMMARY.		
Normal and High Schools	456	3.51
Grammar schools	2,534	19.48
Primary schools	10,014	77.01
Total	13,004	100.00

TABLE X.—*Whole enrollment of pupils, white and colored, in the District of Columbia, by grades, for the school year ending June 30, 1889.*

Grades.	Whole enrollment.	Per cent.
Normal Schools	80	.22
High Schools	1,669	4.67
Eighth grade	2,019	5.65
Seventh grade	2,437	6.81
Sixth grade	3,235	9.04
Fifth grade	3,825	10.69
Fourth grade	4,466	12.49
Third grade	4,595	12.85
Second grade	5,156	14.42
First grade	8,282	23.16
Total	35,764	100.00
SUMMARY.		
Normal and High Schools	1,749	4.89
Grammar schools	11,516	32.19
Primary schools	22,499	62.92
Total	35,764	100.00

TABLE XI.—*Growth of the schools since the year* 1880.

School year ending June 30—	Average number of pupils enrolled.					
	First six divisions.		Seventh and eighth divisions.		Total.	
	Number.	Per cent. of increase.	Number.	Per cent. of increase.	Number.	Per cent. of increase.
1880	15,027	.....	6,573	.....	21,600	.....
1881	15,494	3.1	6,567	.....	22,061	2.13
1882	16,063	3.6	6,763	2.98	22,826	3.46
1883	16,524	2.8	7,070	4.53	23,594	3.36
1884	16,642	.71	7,225	2.19	23,867	1.11
1885	17,468	4.9	7,689	6.42	25,157	5.40
1886	18,720	7.1	8,191	6.52	26,911	6.97
1887	19,285	3.0	8,448	3.13	27,733	3.05
1888	19,762	2.4	8,791	4.06	28,553	2.95
1889	20,477	3.6	9,088	3.37	29,565	3.54

TABLE XII.—*Average enrollment of pupils in the white and colored schools and the number of teachers employed for each year since the year* 1880.

School year ending June 30—	Average enrollment.						Teachers.	
	First six divisions.		Seventh and eighth divisions.		Total.		Whole number employed.	Increase.
	No.	Per cent. of increase.	No.	Per cent. of increase.	No.	Per cent. of increase.		
1880	15,027	.....	6,573	.....	21,600	.....	434	....
1881	15,494	3.1	6,567	.....	22,061	2.13	461	27
1882	16,063	3.6	6,763	2.98	22,826	3.46	485	24
1883	16,524	2.8	7,070	4.53	23,594	3.36	505	20
1884	16,642	.71	7,225	2.19	23,867	1.11	525	20
1885	17,468	4.9	7,689	6.42	25,157	5.40	555	30
1886	18,720	7.1	8,191	6.52	26,911	6.97	595	40
1887	19,285	3.0	8,448	3.13	27,733	3.05	620	25
1888	19,762	2.4	8,791	4.06	28,553	2.95	654	34
1889	20,477	3.6	9,088	3.37	29,565	3.54	693	39

TABLE XIII.—*Average enrollment of pupils, the number of teachers employed, the cost of tuition, and rates of increase for each year since* 1880.

School year ending June 30—	Average enrollment.		Teachers.		Cost (excluding rent and permanent improvements).		
	Total.	Per cent. of increase.	Number employed.	Increase.	Per pupil (based on average enrollment).	Aggregate amount.	Per cent. of increase.
1880	21,600	.....	434	....	$16.95	$366,199.51	.....
1881	22,061	2.13	461	27	17.28	381,314.19	4.12
1882	22,826	3.46	485	24	17.44	398,254.54	4.44
1883	23,594	3.36	505	20	17.78	419,594.60	5.35
1884	23,867	1.11	525	20	18.22	435,032.79	3.67
1885	25,157	5.40	555	30	18.66	469,550.51	7.93
1886	26,911	6.97	595	40	17.76	477,993.67	1.79
1887	27,733	3.05	620	25	19.11	509,194.01	6.52
1888	28,553	2.95	654	34	19.11	545,717.71	7.17
1889	29,565	3.54	693	39	23.49	594,774.73	8.98

TABLE XIV.—*Whole enrollment of pupils in white and colored schools, the number of teachers employed, and the cost of tuition for each year since the year* 1880.

School year ending June 30—	Whole enrollment.						Teachers.		Cost (excluding rent and permanent improvements).		
	First six divisions.		Seventh and eighth divisions.		Total.		Whole number employed.	Increase.	Per pupil (based on whole enrollment).	Aggregate amount.	Per cent. of increase.
	No.	Per cent. of increase.	No.	Per cent. of increase.	No.	Per cent. of increase.					
1880	18,378	.....	8,061	.....	26,439	.....	434	.....	$13.85	$366,199.51	.....
1881	19,153	4.2	8,146	1.05	27,299	3.2	461	27	13.96	381,314.19	4.12
1882	19,031	*.63	8,289	1.75	27,320	.....	485	24	14.57	398,254.54	4.44
1883	19,836	4.2	8,710	5.07	28,546	4.4	505	20	14.69	419,594.60	5.35
1884	21,221	6.9	9,167	5.24	30,388	6.4	525	20	14.31	435,032.79	3.67
1885	21,267	.21	9,598	4.7	30,865	1.5	555	30	15.21	469,550.51	7.93
1886	22,198	4.3	10,138	5.62	32,336	4.7	595	40	14.78	477,993.67	1.79
1887	23,073	3.9	10,345	2.0	33,418	3.3	620	25	15.23	509,194.01	6.52
1888	23,810	3.1	11,040	6.71	34,850	4.28	654	34	15.65	545,717.71	7.17
1889	24,594	3.2	11,170	1.17	35,764	2.62	693	39	16.62	594,774.73	8.98

*Decrease.

TABLE XV.—*Amount expended for rent and sites and buildings each year from the year 1880 to the year 1889, inclusive.*

School year ending June 30—	Rent.	Sites and buildings.
1880	$28,998.35	$74,998.24
1881	26,506.11	103,416.91
1882	26,472.57	253,609.73
1883	14,805.33	103,141.47
1884	8,742.50	103,563.94
1885	7,060.00	118,400.00
1886	6,919.66	61,130.04
1887	7,354.00	73,085.34
1888	10,215.44	239,115.77
1889	14,832.00	*332,312.44

*Including $5,638.04 for permanent improvements to Lincoln building.

OUTLINES OF LECTURES.

The outlines of the lectures referred to in my remarks on Supervision in this report (page 30) are as follows:

EDUCATIONAL PRINCIPLES IN TEACHING MUSIC.

By H. E. HOLT, *Director of Music in Public Schools of Boston.*

The following are the leading thoughts of Mr. Holt's lecture, each of which was elaborated and exemplified:

The natural laws by which the mind gains knowledge demand that a few simple fundamental principles shall be observed in the teaching of all subjects.

If we trace the action of the mind as it gains a knowledge of all objects, we shall find that it first learns the object as a whole, after which the several parts of the object are observed.

The next step is the study of the several parts in their relation to the whole until the whole is seen in each of the parts. Finally, the parts should be studied in their relation to one another.

Methods of teaching to be of any value must have these principles for a foundation, and the closer their application by leading the mind to observe according to these laws, the better the quality of the instruction in all teaching. Especially is this true in teaching music.

These facts are being recognized by all educators, and the great advance that has been made in teaching other subjects in the last decade is the result of a better understanding of the science and art of teaching based upon these universal laws.

Scientific investigation into this subject will reveal the fact that the major scale is the *whole thing* in the study of pitch in music in precisely the same pedagogical sense that any animal, insect, plant, or flower is a whole thing in the study of any of these objects. It will be seen, for instance, that each part of the human body has its function which it

performs for the whole body; the eye sees and the ear hears for the whole body. The eye can not perform the function of the ear, nor the ear that of the eye.

The same principle holds true in the study of music. Each sound of the scale has its function as much as each part of the body or any part of any whole object. This function is the characteristic effect of each sound in the series.

There is but one major scale. All knowledge of intervals should be acquired through careful and systematic practice of this series of sounds, which can be successfully given by any good teacher in our primary schools. This will simplify the teaching of tune wonderfully when the principle underlying the work is understood.

We must not only remember that to teach and name that which can be seen in music is of no value, but we must know *how* to teach and *name* that which can only be *heard*. Hearing is the only avenue to the mind in teaching tune.

In teaching time we can add to the sense of hearing the sense of touch. This gives us two senses through which to reach the mind with the real object in teaching time. The sense of seeing can only be used to indicate and regulate the movement. To teach time in music in the most effective manner these three senses, hearing, touch, and seeing, should be brought into harmonious action until a clear idea of the different units is well established. The different parts of these units or whole things should then be taught and named as clearly and distinctly in teaching time as in teaching the different parts of any whole object.

When these simple principles are understood and properly applied, the teaching of music will be wonderfully simplified and improved, its great value as an educational factor will be appreciated, and its rightful place in educational affairs will be secured.

LECTURES ON AMERICAN HISTORY.

OUTLINE OF FIRST LECTURE—MONDAY, FEBRUARY 18, 1889.

THE RENAISSANCE OF GEOGRAPHY AND THE DISCOVERY OF AMERICA.

By Dr. HERBERT B. ADAMS, *of Johns Hopkins University*

1. Classical Knowledge of Geography.

Phœnician Voyages. Pytheas, the Greek Traveler, 334 B. C.
Influence of Alexander's Conquests.
Julius Cæsar's Survey of the Roman World.
Geographical Ideas of Greek Philosophers.
Seneca's Prophecy, "the finger-point to an undiscovered world."

Venient annis sæcula seris,
Quibus Oceanus vincula rerum
Laxet, et ingens pateat tellus.
Tethysque novos detegat orbes,
Nec sit terris ultima Thule.
—*Medea*, 378–382.

2. The Revival of Classical Geography in the Fifteenth Century.

The Publication of Ptolemy's *Geographia*, 1475. Five editions before 1492.
The *Imago Mundi*, full of Quotations from Ancient Writers.
Columbus an Italian Navigator and Maker of Charts. Toscanelli's Map, 1474.
Columbus quotes Seneca to Queen Isabella.
The Italian Poet Pulci, 1431–1487, in his *Morgante Maggiore*, anticipates Columbus—

"* * * his bark
The daring mariner shall urge far o'er
The western wave, a smooth and level plain,
Albeit the earth is fashioned like a wheel.
Man was in ancient days of grosser mold,
And Hercules might blush to learn how far
Beyond the limits he had vainly set
The dullest sea-boat soon shall wing her way."
—Translated by Prescott, *Ferdinand and Isabella*, vol. ii.

3. Pre-Columbian Discovery of America.

The Royal Society of Northern Antiquaries at Copenhagen.
Professor Rafn and his "*Antiquitates Americanæ*," 1837.
Voyages of the Northmen to North America.
Iceland colonized from Norway, Greenland from Iceland (ninth century).
Iceland converted to Christianity and Vinland discovered, *circa* 1000 A. D.
Extracts from Icelandic Sagas. Saga of Erik the Red. Saga of Thorfinn.

"It is said their long-boat was filled with grapes. Now when there was a cargo [of timber] cut down for the ship, and when the spring came they got ready, and sailed away; and Lief gave the land a name after its qualities, and called it Vinland."

"People told me when I came
Hither, all would be so fine;
The good Vinland, known to fame,
Rich in fruits, and choicest wine."

Adam of Bremen, 1075, confirms the report of the discovery of Vinland.

The Danish King told him "that an island had been found by many in that ocean, which is called Vinland, because vines grow there spontaneously, producing excellent wine."

The Heimskringla, or Chronicle of the Kings of Norway, by Snorro Sturleson, 1178–1241.

"The same winter was Lief, the son of Erik the Red, with King Olaf, in good repute, and embraced Christianity. But the summer that Gissur went to Iceland, King Olaf sent Lief to Greenland, in order to make known Christianity there; he sailed the same summer to Greenland. He found, in the sea, some people on a wreck, and helped them; the same time discovered he Vinland the Good, and came in harvest to Greenland."

Columbus in Iceland, 1477. His merit as a discoverer not affected by the Norse discoveries.

4. Venetian Travels in the Orient and the Voyages of the Xeno Brothers.

Marco Polo, 1256–1323. His published Travels.
Polo's Account of the Wealth of Japan.
Influence upon Columbus, who sought not Vinland but Zipangu and the Indies.
The Xeno Brothers of Venice. Their Voyages to Northern Seas.
Their Map of Greenland, Estotiland, and Drogio.

Drogio, "a very great country and, as it were, a new world."

Venetian Map-Making, Fra Mauro's "wall-map" in his cloister, 1460.
John Cabot, the Venetian Pilot, English Discoverer of North America, 1497.
First Conception of America as Asia, with off-lying islands.

5. The Discovery of America to Science by Amerigo Vespucci.

Discovery of the West Indies by Columbus. First Mainland, 1498.
The Florentine Geographer, Amerigo Vespucci, 1451-1512.
Discovery of the mouth of the Amazon.
Idea of a New World slowly dawns upon Europe.
Vespucci's Service to Geographical Science. Letters to the Medici.
The name "America" proposed in his honor by a Monk in St. Dié, 1507.
Meaning of the Name—"rich in industry," or "full of business."
First Use of Name by Lionardo da Vinci upon a Map of South America.

6. "The Discovery of America by Columbus the greatest event of Secular History."—*Charles Sumner.*

AUTHORITIES FOR PRIVATE READING.

N. B.—One or two of the following books will serve to illustrate any text-book course in American History:

CHARLES SUMNER, Prophetic Voices concerning America.

"I see one people, and one law, and one language, and one faith, and, over all that wide continent, the home of freedom, and a refuge for the oppressed of every race and of every clime."—*John Bright.*

JUSTIN WINSOR, Narrative and Critical History of America, vol. ii.

This valuable work contains the best account of the historic influences leading to the discovery of America by Columbus and Vespucci. Particularly valuable is the description of the earliest maps.

STEVENS, Historical and Geographical Notes on the Earliest Discoveries of America.

This somewhat rare book clearly shows, as does Mr. Winsor's, the ideas of the early discoverers regarding the new lands as lying off the Asiatic coast.

KOHL, History of the Discovery of the East Coast of North America. Collections of the Maine Historical Society, Second Series, vol. i.

A scholarly work, with copies of the earliest charts.

DECOSTA, Pre-Columbian Discovery of America.

The author endeavors to identify the localities visited by the Northmen.

PUBLICATIONS OF THE PRINCE SOCIETY. Voyages of the Northmen to America.

This work contains English translations of the Icelandic Sagas, with other valuable materials from Professor Rafn's classic work, also a good bibliography of the Norse Discoveries.

MALLET, Northern Antiquities.

GRAVIER, Découverte de l'Amérique par les Normands au Xe Siècle.

This contains a review of ancient geographical theories, and is based upon Rafn, whose map of Vinland is shown, also a fac-simile of the Dighton Rock Inscription, now generally discredited, like all Norse monuments in America.

SMITH, J. T., Discovery of America by the Northmen.

WHEATON, History of the Northmen.

HAKLUYT SOCIETY PUBLICATIONS, Voyages of the Venetian Brothers, Nicolo and Antonio Xeno, to the Northern Seas.

HAKLUYT SOCIETY, Letters of Columbus, edited by R. H. Major.

R. H. MAJOR, On the Landfall of Columbus, Journal of the Royal Geographical Society, 1871.

IRVING, Life of Columbus.

ARTHUR HELPS, Life of Columbus.

SANTAREM, Voyages of Vespucius.

LESTER, Life and Voyages of Vespucius.

LETTERS, SKETCH, AUTOGRAPH, etc., of AMERICUS VESPUCIUS, Mag. of Amer. Hist., vol. iii, 1879.

This third volume of the magazine contains interesting articles on the Dighton Rock Inscription, the Old Stone Mill at Newport, the Lenox Globe, the Globe of Ulpius, etc.

JOHN FISKE, How America came to be Discovered, Harper's Magazine, December, 1881.

MARIE A. BROWN, The Icelandic Discoveries of America. See also her "Plea before the Select Committee of the U. S. Senate for recognition of Leif Erikson."

An important point about the Norse settlements in America is that they did not last. The Spanish, French, and English discoveries led to permanent colonization. Miss Brown's zeal in the interest of Leif Erikson will help to popularize knowledge of the Norse discoveries, but it is a mistake to disparage Columbus, or to excite religious prejudice against him and Catholic Spain. The Norse were as good Catholics as the Spaniards. Leif was even reproached by his pagan father, Erik the Red, for bringing priests to Greenland.

OUTLINE OF SECOND LECTURE—THURSDAY, FEBRUARY 28, 1889.

THE INDIANS OF NORTH AMERICA.

By MAJOR J. W. POWELL, *Director of U. S. Geological Survey.*

I—Distribution of the Indians by Stocks or Tribes.
II—The Arts of Life practiced by the Indians.
III—The Æsthetic Arts practiced by the Indians.
IV—Indian Forms of Tribal Government.
V—Indian Languages.
VI—Indian Mythology and Religion.

SELECTED INDIAN BIBLIOGRAPHY.

1. DRAKE, SAMUEL G., Indian Captivities—New York and Auburn, 1856. (Original narratives; see especially that of Col. James Smith, also published separately as "Account of the remarkable Occurrences in the Life and Travels of Col. James Smith." Cincinnati, 1870.)
2. TANNER, JOHN, Narrative of Captivity and Adventures of, during thirty years' residence among the Indians. Edited by Edwin James, New York, 1830.
3. HUNTER, JOHN DUNN, Manners and Customs of the several Indian Tribes located west of the Mississippi—also entitled "Memoirs of a Captivity among the Indians of North America from Childhood to the Age of Nineteen." London, 1824.
4. HENRY, ALEXANDER, Travels and Adventures in Canada and the Indian Territories, 1760–1776. New York, 1809.
5. ADAIR, JAMES, History of the American Indians, etc., London, 1775. (Really an account of the ceremonies, customs, and home-life of the Gulf tribes, written in support of the Jewish theory, by one who knew them intimately forty years.)
6. JONES, PETER, History of the Ojibway Indians—London, n. d. 1861. (Written by a preacher of the tribe.)
7. WARREN, WM. W., History of the Ojibway Indians—in Coll. Minn. Hist. Soc., V—St. Paul, 1885. (Written by a mixed blood descended from the hereditary chiefs.)
8. SMITH, Capt. JOHN, True Relation of Virginia—Boston, 1866. Also entitled "True Travels, Adventures, and Observations of Capt. John Smith." Richmond, 1819.
9. HAWKS, F. L., History of North Carolina, Vol. I, Fayetteville, N. C., 1859. (Vol. I contains the narrative of Thomas Hariot, of the Roanoke colony of 1585; also published as "A Brief and True Report of the New Found Land of Virginia." New York, 1871.)
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OUTLINE OF THIRD LECTURE—THURSDAY, MARCH 14, 1889.

CAPTAIN JOHN SMITH AND THE FIRST SETTLEMENTS IN AMERICA.

BY R. J. FINLEY, *of John Hopkins University.*

1. John Smith, "A youth set upon brave adventures."

   Goes as a page to France.
   First learns the life of a soldier.
   Serves in the wars of the Netherlands.
   Returns to England.
   Retires into "a little woodie pasture."
   Employs himself with study and knightly exercises.

2. He determines to "see more of the world and trie his fortune against the Turks."

   Passage to Italy.
   Experience on the Mediterranean.
   Border wars with the Turks.
   He devises ingenious signals and false fires.
   Captain of Horse.
   Extract from letters of recommendation given to Smith by Sigismundus Bathor, Duke of Transylvania, etc.

   "Know that we have given leave and license to John Smith, an English Gentleman, Captain of 250 Souldiers—whose services doth deserve all praise and perpetuall memory toward us as a man that did for God and his Countrie overcome his enemies; wherefore out of Our love and favour, according to the law of Armes, we have ordained and given him as his shield of Armes, the figure and description of three Turks' heads, which with his sword before the towne of Regall in single combat he did overcome, kill and cut off in the Province of Transilvania. Sealed at Lipswich in Misenland, the ninth of December, in the yeare of our Lord, 1608.—*Sigismundus Bathor.*

3. "The Observations of Captain Smith in Barbarie and other parts of Africa."

   "Morocco was once the principall Citie in Barbarie, situated in a goodly plaine countrie, 14 miles from the great Mount Atlas, and sixtie miles from the Atlanticke Sea, but now little remaining but the King's Palace, which is like a Citie of itselfe, and the Christian Church, in whose flat, square steeple is a great brouch of iron whereon is placed the three golden Bals of Affrica; the first is neere three ells in circumference, the next above is somewhat lesse, the uppermost the least over them as it were an half Ball, and over all a prettie guilded Pyramides. Against these golden Bals hath been shot many a shot, their weight is recorded 700 weight of pure gold, hollow within, yet no shot did ever hit them, nor could ever any conspirator attaine that honour as to get them down. They report the Prince of Morocco betrothed himselfe to the King's daughter of Æthcopia; he dying before the marriage, she caused those three golden Balls to be set up for his monument, and vowed virginity all her life."

   "Fez also is a most large and plentifull countrie; the Chiefe Citie is called Fez, divided into two parts: Old Fez containing about 80 thousand households, the other 4,000, pleasantly situated upon a River in the heart of Barbarie; part upon hils, part upon plaines, full of people, and all sorts of Merchandise. Those two countries of Fez and Morocco are the best parts of Barbarie, abounding with people, cattell, and all good necessaries for man's use."

   "The Kingdome of Congo is about 600 miles diameter any way, the chief city called St. Savadore located upon an exceedingly high mountaine, 150 miles from the Sea, verie fertile, and inhabited with more than 100,000 persons, where is an excellent prospect over all the plaine countreyes about it, well watered, lying (as it were) in the center of this kingdome, over all which the Portugalls now command, though but an handfull in comparison of Negroes."

4. Captain John "bent on trying his fortunes among the heathen of the New World."

Lands, a prisoner on the Virginia Shore.
Released and admitted to the Council.
Explorations up the James river.
Sufferings of the colony.
"Captain Smith committed with the managing of all things."
Discovers the head of the Chickahominy.
Captured by the Savages.
Saved by Pocahontas.

> "At his entrance before the King all the people gave a great shout. The Queene of Appamatuck was appointed to bring him water to wash his hands and another brought him a bunch of feathers, instead of a Towell to dry them. Having feasted him after their best barbarous manner they coulde, a long consultation was helde, but the conclusion was two great stones were brought before Powhatan: then as many as coulde layde hands on him, dragged him to them and therein laid his head, and being ready with their clubs to beate out his brains, Pocahontas, the King's dearest daughter, when no entreaty coulde prevail, got his head in her armes and laid her own upon his to save him from death; whereat the Emperor was contented he should live to make him hatchets, and her bells, beads and copper, for they thought him as well of all occupations as themselves."—*Extract from Smith's Hist. of Virginia.*

Newport, Smith's "Second Pocahontas."
Gold fever among the colonists.
Village burned—rebuilt.
Voyage of discovery up the Chesapeake.

5. John Smith, President of the Colony.

Second arrival of Newport with supplies.
Smith's Map of Virginia.
Troubles with the Indians.
His Rules for the government of the colonists.
Prosperity of the colony under Smith.
Change in the charter—new officers appointed.
Smith's return to England.
Government of the colony under Percy.

6. Smith's last expedition to the New World.

He plans a commercial enterprise.
Arrives off the coast of New England, April, 1607.
Failure of enterprise.
Map and description of New England.
His literary work.
John Smith died June 21, 1631.

Original (now obliterated) Inscription on a slab in St. Sepulchre's Church London, under which lies the dust of Captain John Smith:

"Here lies one conquer'd
that hath conquer'd Kings,
Subdu'd large Territories,
and done things
which to the world
impossible would seem,
But that the truth
is held in more esteeme.
Shall I report
his former service done
In honour of his God
and Christendome:
How that he did
divide from Pagans three

Their Heads and Lives,
Types of his Chivalry:
For which great Service
in that climate done
Brave Sigismundus
(King of Hungarion)
Did give him as a coat
of Armes to weare,
Those conquer'd heads
got by his Sword and Speare,
Or shall I tell
his adventures since,
Done in Virginia,
that large Continence:
How that he subdu'd
Kings unto his yoke,
And made those Heathen flie,
as wind doth smoke;
And made their Land
being of so large a Station
A habitation
for our Christian Nation:
Where God is glorified
their wants suppli'd
Which else for necessaries
might have di'd
But what avails his Conquest
now he lyes
Inter'd in Earth.

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The General Historie of Virginia, New England, and the Summer Isles, with the names of the Adventurers, Planters, and Governours from their first Beginning in 1584 to this present 1626.

A True Relation of Virginia by Captain John Smith, with Introduction and notes by Chas. Dean. (Discredits Smith's story of Pocahontas, etc.). Wiggin, Boston, 1866.

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OUTLINE OF FOURTH LECTURE—THURSDAY, MARCH 21, 1889.

THE OLD CONFEDERACY AND ITS FAILURE.

BY J. A. WOODBURN, *of Johns Hopkins University.*

I. The "Critical Period of American History," 1781–1787.

"The people felt the very foundations of the liberty and the happiness they had fought so long to secure crumbling beneath their feet."—*Hon. George F. Edmunds* in "The State and the Nation," N. A. Review, October, 1881.

"A nation without a national government is an awful spectacle."—*Hamilton.*

A people without a government: or with a Constitution
"Built upon the fundamental thesis
That the first business of government is to tumble to pieces."—*Hosea Bigelow.*

II. The Nation Then and Now.

1. Elements tending to union among the colonies.
   - (*a*) Race, Language, Nationality.
   - (*b*) Institutions.
   - (*c*) Common Interests.
   - (*d*) Common Perils.
2. Elements tending to division and separation.
   - (*a*) Distance.
   - (*b*) Lack of Commercial Intercourse.
   - (*c*) Difficulty in Travel.
   - (*d*) Local Jealousies.

"The men of 1783 dwelt in a long straggling series of republics, fringing the Atlantic coast, bordered on the north and south and west by two European powers whose hostility they had some reason to dread. * * * Frederick of Prussia, though friendly to America, argued that the mere extent of country from Maine to Georgia would suffice either to break up the Union, or to make a monarchy necessary."—*Fiske.*

"At that time the people of the Thirteen States were far more widely separated in institutions, in social habits, in industries and in intercourse than are the people of the Thirty-eight States at the present time."—*Hon. G. F. Edmunds*, N. A. Review, October, 1881.

In 1811, Josiah Quincy, then a member of the national House of Representatives, resisted the proposition to admit Louisiana as unconstitutional—a measure which would justify secession or revolution. To him this new purchase was a distant foreign country, and the idea of crossing the Mississippi for new States was "an ambition without limits," like "wandering after new settlements to the very ends of the earth." Already in his mind the country was too large for the operation of republican government. (*See "Speeches of Josiah Quincy,"* edited by Edmund Quincy.)

As late as 1843 the Oregon Bill met with ridicule in the U. S. Senate on the ground that we could never have an interest in so remote a country. Senator McDuffie, of South Carolina, supposed it would take a representative to Congress ten or eleven months of the year to get to Washington and back from that distant land.

Thus the railroad and the telegraph have "annihilated time and space" and *imperium* and *libertas* are preserved together.

III. Previous movements toward confederation.

1. The New England Confederacy of 1643.
   (*a*) Constitution. (*b*) Purposes. (*c*) Duration. (*d*) Benefits.
2. Various propositions for colonial union between 1684 and 1754.
3. Franklin's plan of union, 1754.
4. The Colonial, or "Stamp Act," Congress of 1765.
5. The Continental Congresses.

IV. The Confederation.

1. The adoption of the articles.

June 10, 1776, proposed in Congress.
November 15, 1777, adopted in Congress.
March 1, 1781, accepted by all the States.
What kind of a government was in operation during these years?

2. Causes of the delay in adoption.

(*a*) Absence of our leading statesmen from Congress.
(*b*) Controversy as to method of voting.
(*c*) Controversy as to method of apportioning troops and taxes.
(*d*) Controversy on foreign trade. New Jersey's objection.
(*e*) Controversy on the western lands. Maryland's objection.

V. Chief provisions of the Articles of Confederation.

VI. Wherein the Confederacy failed.

Summary of Defects

1. There was no executive power.
2. Nor national judiciary.
3. The Federal power could not regulate commerce.
4. Nor establish a uniform revenue.
5. Nor enforce treaties.
6. The predominance of the State in the opinions and expectations of the people.
7. There was no direct representation of the people.
8. The fundamental law acted not upon citizens as individuals but upon States.
9. The large vote requisite in Congress to secure important measures.
10. There was, practically, no power of amendment.
11. Lack of elasticity: No power in Congress not expressly delegated.
12. There was no power in Congress to enforce order.

Washington: "We are one nation to-day and thirteen to-morrow. Who will treat with us in such terms?"

Hamilton: "Laws are a dead letter without courts to define their true meaning and operation." (No. 22, Federalist, advocating a national judiciary.)

Fisher Ames: "Instead of feeling as a nation, a State is our country."

Arthur Lee: "I would rather see the National Government a rope of sand than a rod of iron."

Mr. Fiske summarizes the three defects of the Confederacy:

1. The two-thirds vote necessary for any important legislation in Congress.
2. Impossibility of presenting a united front to foreign countries in respect to commerce.
3. The greatest defect was the lack of any means on the part of Congress of enforcing obedience.

VII. A better Government—"wrung from the grinding necessities of a reluctant people."

Symptoms of failure and decay seen in—

1. Impotence of treaties.
2. Commercial depression.
3. Financial disaster and loss of credit.
4. Social disorders.

CHRONOLOGY OF LEADING EVENTS.

781. The articles of Confederation go into force. Accepted by Maryland, March 1, 1781.
1783. Peace with Great Britain.
1784. Land Cession by Virginia; assured January, 1781.
1786. Shay's Rebellion.
1787. The Constitutional Convention.
Ordinance of 1787.
1788. Constitution ratified.
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(1) The original sources on the "Old Confederacy" are the Journals of Congress, the Colonial Records of the various Colonies, and the works and letters of the men of the time.

These, probably, will be carefully read only by special students of American history. But the instructions of Maryland to her delegates, offered in Congress May 21, 1779, urging her objections to the Articles of Confederation, make one of the most important state papers in our early constitutional history, and should receive a careful reading from the student of the period. The document may be found in Vol. III, p. 281, of the Journals of Congress.

New Jersey's remonstrance, hardly less important, is in Vol. II, p. 603, of the Journals. Add to these the address of Congress to the States, published April 24, 1783 (Journals of Congress, Vol. IV, p. 194), asking for power to levy a duty on imports in order to pay the public debts. This paper was reported by Hamilton, Madison, and Ellsworth, as committee, and it illustrates the rare power of making a budget eloquent.

These three important papers ought to be read by the student of this period, and they will do much to cultivate the taste for that most valuable kind of historical literature, the original document.

The Federalist, the classical and original exposition of the Constitution by the ablest advocates of its adoption, is always an indispensable source for a constitutional study of the Confederacy.

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(6) FISKE'S "Critical Period of American History" (Houghton, Mifflin & Co.) covers the peace period of the Confederacy—between the close of the Revolutionary War, 1783, and the adoption of the Constitution, 1788.

> "'The times that tried men's souls are over,' said Thomas Paine in the last number of the Crisis, after hearing of the ratification of the treaty. * * * Paine was sadly mistaken The most trying time of all was just beginning. It is not too much to say that the period of five years following the peace of 1783 was the most critical moment in all the history of the American people" (p. 55).

This volume of Mr. Fiske, consisting of a series of lectures given in the Old South Meeting-house, Boston, is the latest and is probably the best single volume for the American student and reader upon this epoch. It has been called "the most brilliant historical essay which has yet appeared in America, as popular as McMaster and as philosophical as Von Holst." The volume presents the times in a vivid way, in clear and pleasing English, and it will prove especially profitable and interesting to the casual reader who may not be familiar with the period. To the special student and investigator the work is not so valuable, as Mr. Fiske nowhere refers to authorities.

The appendix contains an excellent bibliography.

(7) The chapter on "The Confederation" in Mr. MORSE'S Life of Hamilton (Vol. I) presents very ably Hamilton's influence on the time and gives a vivid appreciation of the utter inefficacy of the government of the Confederation. It will surely excite in the reader an interest in this period of American history.

(8) FROTHINGHAM'S Rise of the Republic discusses philosophically, in some parts minutely, the whole history of the growth of the colonies towards union. The book is a valuable study, but not easy reading.

(9) Mr. WINSOR, in the "Narrative and Critical History of America." Vol. VII, Ch. III, has a valuable essay on the "Confederation," followed by more valuable "Critical Notes" and bibliography. Mr. CURTIS'S essay on the Constitution, in the same volume, will be found beneficial in this connection.

(10) Copies of the Articles of Confederation may be found in PRESTON'S Documents in American History and in various text-books on United States Constitutional history.

OUTLINE OF FIFTH LECTURE—THURSDAY, MARCH 28, 1889.

THE CONQUEST AND ORGANIZATION OF THE NORTHWEST TERRITORY.

By FREDERICK J. TURNER, *of Johns Hopkins University.*

1. The Northwest gains a boundary within the United States.

1759. Wolfe at Quebec wins it from French absolutism; Treaty of 1763.

> "Four days before he had looked forward to early death with dismay. 'Now, God be praised, I die in peace;' these were his words as his spirit escaped in the moment of his glory. Night, silence, the rushing tide, veteran discipline, the sure inspiration of genius, had been his allies; his battle-field high over the ocean river, was the grandest theatre for illustrious deeds; his victory, one of the most momentous in the annals of mankind, gave to the English tongue and the institutions of the Germanic race the unexplored and seemingly infinite West and North." (Bancroft's History of the United States, II, 510–11.)

1774. England in the Quebec Act attempts to unite it to Canada under arbitrary rule, but

1778. George Rogers Clark's expedition gives the new Republic military possession.

> "As for the description of the Illinois Country which you seem so anctious for you may expect to have by the ensuing fall as I expect by that period to be able to give you a more Genl Idea of it. this You may take for granted that its more Beautiful than any Idea I could have formed of a Country almost in a state of Nature, everything you behold is an Additional Beauty; On the River You'll find the finest Lands the Sun

ever shone on; In the high Country You will find a variety of Poor and Rich Lands with large Meadows extending beyond the reach of Your Eyes Variegated with groves of trees appearing like Islands in the Seas, covered with Buffloes and other Game; in many Places with a good Glass You may see all those that is on their feet in half a Million of Acres; so level is the Country, which some future day will excell in Cattle. The Settlements of the Illinois commenced about one hundred years ago by a few Traders from Canada." (Clark's letter to George Mason, of Virginia, 1779.)

1783. By the diplomacy of Franklin, Adams, and Jay, and the friendliness of Lord Shelburne, the Northwest is included within the boundaries of the Union.

2. The Northwest passes under the control of the Federal Government.

1777. Maryland refuses to sign the Articles of Confederation, unless the western lands become the common property of the Union.

"We are convinced policy and justice require that a country unsettled at the commencement of this war, claimed by the British crown, and ceded to it by the treaty of Paris, if wrested from the common enemy by the blood and treasure of the thirteen States, should be considered as a common property, subject to be parcelled out by Congress into free, convenient, and independent governments, in such manner and at such times as the wisdom of that assembly shall hereafter direct." (Maryland's instructions to her delegates; Journals of Congress, III, 282.)

1780. Congress passes a resolution, the corner-stone of our territorial system:

"*Resolved*, That the unappropriated lands that may be ceded or relinquished to the United States by any particular State, pursuant to the recommendation of Congress of the 6th day of September last, shall be disposed of for the common benefit of the United States, and be settled and formed into distinct republican States, which shall become members of the Federal Union, and have the same rights of sovereignty, freedom, and independence as the other States." * * *—(Journals of Congress, III, 535.)

1781–1786. New York, Virginia, Massachusetts and Connecticut cede their western claims to the United States, except that Connecticut holds the Western Reserve until 1800.

3. The Northwest gains her charter of liberties.

1784. Jefferson's Ordinance.

"I need not remark to you, sir, that the flank and rear of the United States are possessed by other powers, and formidable ones, too; nor how necessary it is to apply the cement of interest to bind all parts of the Union together by indissoluble bonds, especially that part of it which lies immediately west of us with the Middle States. * * *

"The Western States (I speak now from my own observation) stand as it were on a pivot. The touch of a feather would turn them any way. * * *

"I consider Rumsey's discovery of working boats against the stream, by mechanical powers principally, as not only a very fortunate invention for these States in general but as one of those circumstances which have combined to render the present time favorable above all others for fixing, if we are disposed to avail ourselves of them, a large portion of the trade of the western country in the bosom of this State irrevocably." (Washington to Benjamin Harrison, governor of Virginia, Oct. 10, 1784.)

"The spirit of emigration is great. People have got impatient; and though you can not stop the road, it is yet in your power to mark the way; a little while and you will not be able to do either. It is easier to prevent than to remedy an evil. (Washington to Richard Henry Lee, 1784.)

1785. King's futile resolution on slavery.

1785: The "Ordinance for ascertaining the mode of disposing of lands in the western territory."

"Compact and progressive settling will give strength to the Union, admit law and good government, and federal aids at an early period." (Washington to Hugh Williamson, 1785.)

"The settling a mode for surveying and selling the fine country northwest of Ohio River, for the purpose of discharging our public debt, is an object that hath engaged much attention of Congress, and promises, we think, in due season, to remove the debts created by the last war." (Richard Henry Lee to LaFayette, June 11, 1785.)

"There shall be reserved the lot No. 16, of every township, for the maintenance of public schools within the said township." (Journals of Congress, IV, 521.)

1784–1787: New plans in Congress.

1787: May 11 to July 4: Congress has no quorum. A change of scene.

1783: The plan of the soldiers at Newburg.

> "Propositions for settling a new State by such officers and soldiers of the Federal army as shall associate for that purpose. * * *
>
> "9. That to enable the associators to undertake the settlement of the new State, the United States defray the expenses of the march thither, furnish the necessary utensils of husbandry, and such live-stock as shall be indispensably requisite for commencing the settlement, and subsistence for three years, to wit, one ratio of bread and meat per day to each man, woman, and child; and to every soldier a suit of clothes annually—the cost of these articles to be charged to the accounts of arrearages due to the members of the association respectively.
>
> "10. That, for the security of the State against the Indians, every officer and soldier go armed—the arms to be furnished by the United States, and charged to the accounts of arrearages. Ammunition to be supplied in the same way.
>
> "11. That a constitution for the new State be formed by the members of the association previous to their commencing the settlement, two-thirds of the associators present at a meeting duly notified for that purpose agreeing therein. The total exclusion of slavery from the State to form an essential and irrevocable part of the constitution.
>
> "13. That the State, so constituted, shall be admitted into the confederacy of the United States, and entitled to all the benefits of the Union, in common with the other members thereof. (Pickering's Pickering, I, 546.)

1786: The meeting at the Bunch of Grapes. The Ohio Company of Associates.

1787, July 5: Manasseh Cutler's arrival. His work in securing the ordinance and the land sale.

> "At length told them if Congress would accede to the terms I had proposed, I would extend the purchase to the tenth township from the Ohio, and to the Scioto inclusively, by which Congress would pay near four millions of the national debt, that our intention was an actual, a large and immediate settlement of the most robust and industrious people in America; and that it would be made systematically, which must instantly enhance the value of Federal lands, and prove an important acquisition to Congress. * * * The uneasiness of the Kentucky people with respect to the Mississippi was notorious. A revolt of that country from the Union if a war with Spain took place, was universally acknowledged to be highly probable. And most certainly a systematic settlement in that country conducted by men strongly attached to the Federal government, and composed of young, robust, and hardy laborers, who had no idea of any other than the Federal government, I conceive to be objects worthy of some attention." (Cutler's Journal, 1787.)

1787, July 13: The new ordinance for the government of the territory of the United States northwest of the river Ohio. Important features: prohibition of slavery, guaranty of English liberties, federal colonial system.

> "We are accustomed, sir, to praise the lawgivers of antiquity; we help to perpetuate the fame of Solon and Lycurgus; but I doubt whether one single law of any lawgiver, ancient or modern, has produced effects of more distinct and lasting character than the Ordinance of 1787." (Daniel Webster.)

4. The Northwest gains a colony of Revolutionary veterans of Puritan stock.

1788: The settlement of Marietta.

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OUTLINE OF THE SIXTH LECTURE—THURSDAY, APRIL 4, 1889.

THE FORMATION OF THE AMERICAN CONSTITUTION.

By ALBION W. SMALL, *of Johns Hopkins University.*

I. The process was not supernatural, but natural.

The myth of Zeus and Athene finds here no parallel.

1. The view of Daniel Webster and his school is now under revision.

> Henry Cabot Lodge voices the new criticism when he says: "It was probably necessary, at all events Mr. Webster felt it to be so, to argue that the Constitution at the outset was not a compact between the States, but a national instrument, and to distinguish the cases of Virginia and Kentucky in 1799, and of New England in 1814 from that of South Carolina in 1830. * * * Unfortunately the facts were against him in both instances. When the Constitution was adopted by the votes of States at Philadelphia, and accepted by the votes of States in popular conventions, it is safe to say that there was not a man in the country, from Washington and Hamilton on the one side, to George Clinton and George Mason on the other, who regarded the new system as anything but an experiment entered upon by the States, and from which each and every State had the right peaceably to withdraw, a right which was very likely to be exercised." (Lodge: Webster, p. 176)

2. Our historians have not sufficiently distinguished between different elements of our progress.

(*a*) Development of individual opinion.
(*b*) Development of administrative machinery.
(*c*) Development of national consciousness.

The present lecture is concerned with the *second* line of development.

3. The natural view is more patriotic than the miracle theory.

II. The parties to the Union.

The constituent members of the American Union were thirteen distinct corporations.

The stockholders were British citizens, with rights of citizenship in any part of the British realm.

On the other hand, the corporations themselves were as distinct as though they had been created by different sovereignties.

III. The Congress of 1774 was the beginning of intercorporate coöperation.

1. The Congress was an irresponsible committee of irregular constituencies, with instructions "to consult and advise on proper measures for advancing the best good of the colonies." (Connecticut.)

> The Commons House of Assembly of South Carolina commissioned delegates, "to concert, agree to, and *effectually prosecute*, such legal measures as in the opinion of the said deputies, and of the deputies so to be assembled, shall be most likely to obtain a repeal of the said acts, and a redress of those grievances."
>
> A popular convention in North Carolina resolved: "That * * * be delegates to attend such Congress, and they are hereby invested with such powers as may make any acts done by them, or consent given in behalf of this province, obligatory in honor upon every inhabitant hereof, who is not an alien to his country's good and an apostate to the liberties of America."

2. The colonial corporations approved the acts of the Congress, and resolved to adopt its recommendations, especially those included in the "Act of Association."

IV. Traditional fallacies about the Congress of 1774.

> "The signature of the Association by the members of Congress may be considered as the commencement of the American Union." (Hildreth, III, 46.)
>
> "The Association was virtually law, bearing on the individual, * * * the first enactment, substantially, of a general law by America." (Frothingham, Rise of the Republic, 373.)
>
> That memorable league of the Continent in 1774, which first expressed the sovereign will of a free nation in America." (President John Adams, 1799, Benton's Abridgment, II, 404.)
>
> The words "Union," "law," "sovereign," "nation," are the omnipresent "ambiguous middle terms" in American political discussion till 1865.

V. The Congress of 1775.

(1) Variations, more or less striking in form, from the credentials of 1774, show, in the first place, that the parties sending representatives had more clearly defined purposes than before; but, in the second place, that they had not changed their views of the nature of the central committee, which was to further define their purposes, and devise corresponding plans.

(2) Three views of this Congress:

(*a*) A committee of advisers.

(*b*) A committee of consultation and leadership.

(*c*) A committee of government.

The acts of the Congress show that the second view is correct. The colonists did not consciously commit themselves to any form of organization, or to any permanent intercolonial relationship of a legal character, by allowing the Congress thus to act for the whole. A philosophical view of their experience discovers, however, in the very naturalness of intercolonial action, the foreshadowing of a permanent organ of such action. The people had not, however, willed the establishment of the future order.

VI. Meanwhile the colonial corporations were reorganizing as distinct commonwealths.

(1) In referring to Congress for advice about "taking up and exercising the powers of civil government," the colonies looked to Congress for *signs*, not for *sanctions*. Before State constitutions were adopted, *de facto* State governments had been formed.

(2) The Declaration of Independence *destroyed*, but did not create institutions. The relations between the colonies after the Declaration were simply those which existed before that act, minus those which it sundered.

(3) The new State constitutions speak the language of complete independence of other States, while they recognize undefined relations.

"The people of this State, being by the Providence of God free and independent, have the sole and exclusive right of governing themselves as a free, sovereign, and independent State; and having from their ancestors derived a free and excellent Constitution of Government, whereby the Legislature depends on the free and annual Election of the People, they have the best Security for the Preservation of their civil and religious Rights and Liberties." * * *

"Be it enacted, * * * That the ancient form of Civil Government contained in the Charter from Charles the Second, King of England, and adopted by the People of this State, shall be and remain the Civil Constitution of this State, under the sole authority of the People thereof, independent of any King or Prince whatever. And that this Republic is, and shall forever be and remain a free, sovereign, and independent State, by the name of the State of Connecticut." (Poore's Charters and Constitutions, I, 257; American Archives, Ser. V, Vol. III, p. 447.)

VII. The Confederation, with all its weakness, was a recognition of interstate relations and interests which demanded interstate organization.

(*Vid* Syllabus of fourth lecture of this course.)

(*a*) The inhabitants of each colony had, under the British constitution, certain rights in each colony. The Declaration of Independence extinguished the legal sanction of these rights, but not their moral sanction.

(*b*) The States in Congress were collectively concerned in diplomatic relations.

(*c*) The States in Congress were borrowers in foreign money markets.

(*d*) The States in Congress were exercising collective jurisdiction over land.

(*Vid.* Syllabus of fifth lecture of this course.)

Accordingly, statesmen frequently spoke of the "Constitution of the United States," during the period of the Confederation. The "Constitution" was that of allied States: the work to be done was that of a single nationality.

VIII. The Federal Convention a last forlorn hope.

On the authority of Gouverneur Morris, who was an eye-witness, Mr. Bancroft relates the following (History of the United States, last ed., vol. vi, p. 210): "Of the delegates, some were for halfway measures for fear of displeasing the people; others were anxious and doubting. Just before there were enough to form a quorum, Washington, standing self-collected in the midst of them, his countenance more than usually solemn, his eyes seeming to look into futurity, said: 'It is too probable that no plan we propose will be adopted. Perhaps another dreadful conflict is to be sustained. If, to please the people, we offer what we ourselves disapprove, how can we afterwards defend our work? Let us raise a standard to which the wise and the honest can repair: the event is in the hands of God.'"

(For an object lesson in the use of evidence, compare Fiske, Critical Period, p. 232. For another expression of similar view by Washington, *vid.* Sparks, Washington, III, 412.)

IX. The Constitution a series of compromises.

1. Between the national and the confederate principle.

(*a*) The Virginia plan.
Elliot, Debates, ed. of 1876, I, 143, and V, 126 *sq.*

(*b*) The New Jersey plan.
Elliott, I, 175, and V, 191.
Bancroft, VI, 233.
Curtis, History of the Constitution, II, 92 and 145.

"This plan sustains the sovereignty of the respective States, that of Mr. Randolph destroys it." (Mr. Lansing in the Convention.)

(*c*) The "Connecticut Compromise."

Only by stretch of courtesy to be credited to Connecticut.

Madison Papers, vol. II, 987, 990, and 1024, note; Works of John Adams, IX, 465.

On the other side of the case, consult Bancroft, VI, 239 *sq.*; and Johnston, Connecticut, 322 *sq.*

2. On the basis of representation.

(*a*) Shall representation be in proportion to property or population?

(*b*) Shall slaves be reckoned as property or population?

Madison Papers, vol. II, 1051 *sq.*

(Cf. Bancroft, VI, 255–269, and Curtis, II, Chap. VII.)

3. On the slave trade and the regulation of commerce.

Madison Papers, III, 1448 *sq.*

Bancroft, VI, 314 *sq.*

Curtis, II, Chap. X.

4. Negative on acts of states given (inadvertently?) to the judiciary after being denied to the legislature.

Elliot, Debates, V, 321–2.

In a letter to Timothy Pickering Gouverneur Morris says, speaking of the Constitution: "The instrument was written by the fingers which write this letter. Having rejected redundant and equivocal terms, I believed it to be as clear as our language would permit; excepting, nevertheless, a part of what relates to the judiciary. On that subject conflicting opinions had been maintained with so much professional acuteness that it became necessary to select phrases which, expressing my own notions, would not alarm others nor shock their self-love; and, to the best of my recollection, that was the only part which passed without cavil."

X. The alternatives presented to the States.

"Like Madison, Pinckney, Franklin, and Washington, Hamilton considered the choice to be between anarchy and convulsion on the one side, and the chances of good to be expected of this plan on the other. Upon this issue in truth, the Constitution went to the people of the United States." (Curtis, II, 487.)

"When the last members were signing, Doctor Franklin, looking towards the President's chair, at the back of which a rising sun happened to be painted, observed to a few members near him, that painters had found it difficult to distinguish in their art a rising from a setting sun. I have, said he, often and often in the course of the session, and the vicissitudes of my hopes and fears as to its issue, looked to that behind the President without being able to tell whether it was rising or setting; but now, at length, I have the happiness to know that it is a rising and not a setting sun." (Madison Papers, III, 1624.)

XI. The Constitution less a consummation than a beginning.

OUTLINE OF SEVENTH LECTURE—THURSDAY, APRIL 11, 1889.

THE HISTORY OF AMERICAN LITERATURE.

By AINSWORTH R. SPOFFORD, *Librarian of Congress.*

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OUTLINE OF EIGHTH LECTURE—THURSDAY, APRIL 18, 1889.

THE HISTORY OF EDUCATION IN AMERICA.

By JAMES MACALISTER, LL.B., *Superintendent of Public Schools, Philadelphia.*

SYLLABUS OF TOPICS.

I. The beginnings of public education.

The foundations laid by the Puritan settlers of New England.

1. Massachusetts. Records of the general court:—

> "At a Court holden September 8, 1636, and continued by adjournment to the 28th of the 8th month, October, 1636, the Court agreed to give £400 towards a school or college; £200 to be paid next year, and £200 when the work is finished; and the next Court to appoint where and what building."

Law of 1647:

> "It is, therefore, ordered that every township in this jurisdiction, after the Lord hath increased them to the number of fifty householders, shall then forthwith appoint one within their own town to teach all such children as shall resort to him to write and read, whose wages shall be paid either by the parents or masters of such children or by the inhabitants in general, by way of supply, as the major part of those that order the prudentials of the town shall appoint, *provided*, those that send their children be not oppressed by paying much more than they can have them taught for in other towns; and it is further ordered, that, where any town shall increase to the number of one hundred families or householders, they shall set up a grammar school, the master thereof being able to instruct youth so far as they may be fitted for the university, *provided*, that if any town neglect the performance hereof above one year, that every such town shall pay £5 to the next school, till they shall perform this order."

2. Connecticut. In the fourth year (1642) after the planting of the colony of New Haven, a free school was set up to be maintained "out of the common stock of the town."

> "As early as 1701, the law of Connecticut required every parent to see that he had no child or apprentice in his household who could not read the word of God and the 'good laws of the colony.' The system embraced a common school in every town of seventy families, a grammar school in the four chief county towns to fit pupils for college, and a college, to which the general court made an annual appropriation of £120." (Ten Brook's American State Universities.)

3. "Probably no other community of pioneers [New England] ever so honored study, so reverenced the symbols and instruments of learning. Theirs was a social structure with its corner-stone resting on a book. Universal education seemed to them a universal necessity; and they promptly provided for it in all its grades." (Tyler's History of American Literature.)

II. Education in the Middle States.

Late establishment of public schools in New York, Pennsylvania, New Jersey, Maryland and Delaware. Causes of this backwardness.

III. Growth of public education in the Northwest.

1. The *Land Ordinance of* 1785 provided that "there shall be reserved from sale the lot No. 16 of every township for the maintenance of public schools within said township."

2. The *Ordinance of* 1787 declared that "religion, morality, and knowledge being essential to good government, schools and the means of education should forever be encouraged."

3. Subsequent grants of land to the Northwest States for the support of education.

4. Rapid extension of public education in these States.

V. The historic position of public education in the South.

Virginia, North Carolina, South Carolina, Georgia.

Jefferson's plan for a State system of education in 1779. Causes which prevented the growth of public education in the South. The Southwestern States. Recent development of schools.

VI. The influence of changes in social conditions upon education.

1. Decline of the public schools in the latter half of the eighteenth century. Massachusetts Law of 1824.

2. Revival of interest in public education and improvement of the schools, 1825 *circa*. Influence of Joseph Lancaster's visit to the United States. Labors of Horace Mann and Henry Barnard. Formation of Teachers' Institutes. Improvement of school buildings, school organization and administration, methods of instruction. Changes in the character and position of teachers.

VII. Secondary education.

The first grammar schools in New England—their decline and disappearance. Foundation of academies—Dummer, 1763; Phillips; Exeter; Establishment of high schools—Boston Latin school. Adoption and modification of these types throughout the country.

VIII. Growth of higher education.

1. The first colleges—Harvard, 1638; William and Mary, 1692; Yale, 1701; Princeton (College of New Jersey), 1747; Brown (Rhode Island), 1764; Columbia (Kings), 1787; Pennsylvania, 1791.

2. The foundation and growth of State Universities. Ohio University (The American Western University), founded 1802. The University of Michigan, 1841. General adoption of the system by the Western States.

3. Higher education of women. Co-education at Oberlin College and at Michigan, Wisconsin, and Cornell Universities. Women's colleges—Vassar, Smith, Wellesley, Bryn Mawr.

4. Development of the College into the University—Harvard, Yale, Princeton, Pennsylvania, Michigan.

IX. The rise and progress of pedagogical instruction.

1. Normal schools—first school established at Lexington, Mass., 1839. State normal schools.

2. University instruction in pedagogy—first chair established in University of Michigan, 1879. Extension of this feature of professional education.

X. Present organization and administration of public education—city and State systems.

XI. Pending questions connected with public education.

1. The right and duty of the State in relation to education.
2. The secularity of the school.
3. The question of compulsory education.
4. The problem of illiteracy.
5. The relation of the Federal Government to education.
   (1) The Bureau of Education—its powers and duties.
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OUTLINE OF TENTH LECTURE—THURSDAY, MAY 2, 1889.

FORMS AND UNITS OF GOVERNMENT.

By W. B. POWELL.

But let that man with better sense advise,
That of the world least part to us is read;
And daily how, through hardy enterprise,
Many great regions are discovered,
Which to late age were never mentioned.—SPENCER.

Those who compare the age on which their lot has fallen with a golden age which exists only in their imagination may talk of degeneracy and decay; but no man who is correctly informed as to the past will be disposed to take a morose or desponding view of the present.—MACAULAY.

I. Government considered.

(*a*) Regulative sociology.
(*b*) Its complex nature.

II. Forms of government.

(*a*) Legislative.
(*b*) Executive.
  1. Administrative.
  2. Operative.
(*c*) Judicial.

III. Units of government: (Territorial), town(ship), county, State, nation.

(*a*) The powers of government in town(ship), county, and State.
  1. In the New England States.
  2. In the Middle and Western States.
  3. In the Southern States.

IV. Superimposed units (Territorial).

(*a*) Judicial units.
(*b*) School units.
(*c*) Cities, villages, boroughs.

V. The tendency of differentiation at the present time to specialize the application but increase the functions.

(Commissioners, or Boards, with large discretionary powers.)

VI. History and growth of—

(*a*) Town(ship).
(*b*) County.
(*c*) State.
(*d*) Nation.
(*e*) Of accidental or superimposed units.

The governments and the institutions of the American people are not the ephemeral growth of a moment of revolution, but they are the offspring of a history and tradition as ancient as those which have moulded the common law and upon which rests the fabric of the British Empire.—BROOKS ADAMS, *in Atlantic Monthly, November*, 1884.

The American Constitution is no exception to the rule that everything which has power to win the obedience and respect of men must have its roots in the past, and the more slowly every institution has grown, so much the more enduring is it likely to prove.—BRYCE.

It is just as improbable that free local institutions should spring up without a germ along American shores as that English wheat should have grown here without planting.

The town and village life of New England is as truly the reproduction of Old English types as those again are the reproductions of the village community system of the ancient Germans. Investigators into American institutional history will turn as naturally to the mother country as the historians of England turn toward their older home, beyond the German Ocean.—HERBERT B. ADAMS, Ph. D.

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FIRST DIVISION.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: I have the honor to submit herewith a brief report of the condition of the schools of the first division for the year just completed.

SCHOOL ACCOMMODATIONS.

TABLE I.—*Showing distribution of schools by buildings.*

Schools.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Total.	School-rooms.	No. of teachers.
Franklin	3	4	3	1	1	1	1	1	15	15	12
Dennison	3	2	2	2	1	1	2	2	15	12	15
Force	2	2	2	2	2	2	2	2	16	12	16
Analostan	1	1	2	2	2	2	2	2	14	12	14
Thomson	.....	.....	.....	2	2	1	1	1	7	6	7
Fourteenth and N streets	.....	.....	1	1	1	.....	.....	.....	3	3	3
Weightman	1	1	1	2	1	1	1	1	9	8	9
1400 S street	.....	.....	.....	.....	.....	1	1	.....	2	2	2
2112 Fourteenth street	.....	.....	.....	.....	1	1	.....	.....	2	2	2
Total number of schools.	10	10	11	12	11	10	10	9	83	72	*80

* Not including training teachers.

By reference to the above table it will be observed that two new eighth-grade schools have been formed and one new seventh grade; also, that one-fourth grade school at the Weightman has been discontinued. The new eighth grades were placed in the Weightman and in the Dennison; the new seventh grade in the Force.

The erection of the new Berret building on the site of the old building compelled us to place the schools there located temporarily in rented rooms on S street and on Fourteenth street. These rooms were but little better than the rooms vacated, but by using them we avoided the alternative of increasing the number of half-day schools in the third and fourth grades.

During the year two new buildings, the Berret and the Adams, have been completed; so that, in reorganizing in September, for the first time since my connection with the schools, every class, excepting possibly three schools at the Thomson, will be located in a well lighted, well heated, and properly ventilated room.

TABLE II.—*Showing condition of buildings.*

Buildings.	How heated.	Light.	Ventilation.	Water-closets.	Play-rooms.	Yards.	Owned or rented.
Franklin	Steam	Excellent.	Good	Good	Excellent.	Excellent.	Owned.
Thomson	Stoves and furnace.	Fair*	Poor	Poor	None for boys.	None	Owned.
2112 14th st	Stoves	Fair	Poor	Poor	None	None	Rented.
14th and N sts	Stoves	Good†	Poor	Good	None	None	Rented.
Dennison	Steam	Excellent.	Excellent.	Excellent.	Excellent.	Excellent.	Owned.
Force	Steam	Excellent.	Good	Good	Excellent.	Excellent	Owned.
Analostan	Steam	Excellent.	Excellent	Excellent.	Excellent.	Excellent.	Owned.
Weightman	Furnaces.	Excellent.	Excellent.	Excellent.	Excellent.	Excellent.	Owned.
1400 S st	Stoves	Poor	Poor	Fair	None	None	Rented.

* Lower rooms poor; upper rooms good. † East and west rooms good; middle room poor.

Further comment in reference to the condition of the rented rooms reported in the above table as unsuitable in every way for school purposes is unnecessary, as the day has happily passed when we are forced to depend upon such quarters for the accommodation of our children. Unfortunately we can not entirely abandon the Thomson. Three of the best rooms will be used during the coming year for primary grades. The remaining rooms will be occupied by the schools in manual training.

School buildings and school rooms have been well cared for. In some of the older buildings there are a number of sets of furniture that are beginning to show the effect of the wear and tear to which they have been subjected during many years of use. This furniture, at a cost trifling as compared to the original cost or the cost of new furniture, could be made over into practically new furniture. There are also in many buildings chairs that need reseating, tables and desks that need recovering and varnishing. It is certainly not in the interest of economy to allow our furniture to go to pieces, nor is it advisable from an educational stand-point to neglect any means at hand to make our school rooms more attractive.

TABLE III.—*Showing half-day schools.*

Schools.	Number of half-day schools.	Grades of half-day schools.	Number above second grade.
Franklin	2	1, 2	
Thomson	2	1, 2	
Dennison	6	1, 2, 3, 4	2
1400 S street	1	2	
Force	8	1, 2, 3, 4	4
Analostan	4	1, 2	
Weightman	2	1, 2	
Total	25		6

Though renting two additional rooms, we have not been able to reduce the number of half-day schools. In my last report I recommended the renting of six additional rooms in order that half-day schools above the second grade might have their full allotment of time. As the rooms

were needed in a section of the District where rooms can not be rented for school purposes, we were obliged to continue the half-day system.

The result has not been less unfortunate than in the past. Neither in scholarship nor attendance do half-day schools compare favorably with those having full time. But arguments against the system need not be repeated here, as we hope in September to organize with no half-day schools above the second grade.

TABLE IV.—*Showing distribution of pupils by grades, average age, and average number per teacher.*

Grades.	No. of schools.	Whole enrollment.	Average enrollment.	Average daily attendance.	Average number of pupils per teacher.	
					Based on whole enrollment.	Based on average enrollment.
Eighth	10	515	440	415	51.5	44
Seventh	10	500	420	395	50	42
Sixth	11	559	478	450	50.9	43.4
Fifth	12	627	539	499	52.2	44.9
Fourth	11	623	505	465	55	45
Third	10	513	443	406	51.3	44.3
Second	10	507	420	387	50.7	42
First	9	558	420	378	62	46.5
Total	83	4,402	3,665	.....	53	44.1

The above summary shows a decrease of 65 in the total enrollment and an increase of 8 in the average enrollment. The greatest enrollment was in January, when 4,006 pupils were reported.

There has been a marked increase in the number of eighth-grade pupils, and a corresponding decrease in the lower grades.

I attribute this falling off in attendance to the lack of suitable accommodations in the rented rooms, and to the half-day system. You will observe that there has been a greater average enrollment in the eighth grades than in either the first, second, or third grades.

ATTENDANCE.

TABLE V.—*Showing percentage of attendance, cases of tardiness, and absence of teachers.*

Months.	Percentage of attendance.	Cases of tardiness.	Substitute service.
September	97.6	122	27.5
October	95.4	581	65
November	94	590	25.5
December	93.4	493	29.5
January	93.5	730	63
February	91.8	589	38.5
March	90.6	525	54.5
April	89.9	437	73.5
May	91.1	636	62
June	91.7	636	61
	.....	5,340	501

There has been an improvement in the attendance of pupils during the past year. I think the teachers generally have used all proper means to enforce a regular attendance of all scholars who have applied for school privileges. No effort has been made that I know of to bring into the schools those that should be there and are not. While in nearly every case the percentage of attendance is normal, here and there teachers have failed to secure a regular and willing attendance, with no good reason for their failure. In such cases it is not difficult to ascertain the true reasons. There is usually little that is attractive in the school work to induce pupils to attend willingly and no genuine effort is made to *inforce* regular attendance. In such schools poor discipline is found usually as well as lifeless teaching.

In tardiness I regret to confess that the schools of the first division are among the first in the number of cases reported. In my last report I was obliged to make a similar confession, and regret that we can not show more decided improvement. The number of cases reported this year was smaller by nearly 1,000 than last year, but unquestionably the average of 64 cases to a school is too large. It has been suggested as a possible reason that the people of the first division do not take breakfast early enough in the day to send their children to school by 9 o'clock. It has also been suggested that much of the tardiness is due to late trains from the suburbs. Undoubtedly both causes account for much tardiness, still I believe the real reason is an unintentional indifference or carelessness on the part of the teachers and the failure, therefore, to make the child, and through the child the parent, realize sufficiently the importance of promptness and punctuality as features in his educational development. I will make an effort to remedy this fault in the future.

During the year the absence of teachers aggregated five hundred days, the absence being caused in nearly every case by sickness. I have referred to this fact in order to emphasize the importance of creating a corps of competent substitute teachers, from whom we may expect broader and better work than has been given in the past by many of our inexperienced substitutes. A teacher who is compelled by illness to leave her school has a right to expect that the substitute, for whose services she is obliged and willing to pay, shall do something more than preserve good order and entertain the pupils.

That this branch of our teaching force may be strengthened, I believe that all certificate holders, and others who may desire to take advantage of the opportunities offered for professional training in this substitute work, should be required to follow some definite course of reading to be suggested by the Superintendent, to visit schools frequently, and to attend lectures on different subjects relating to their work, as the Superintendent may direct. More than this, they should be required to report daily at the offices of the supervising principal, in order that as little time as possible may be lost in filling vacancies.

DISCIPLINE.

During the past year there were reported 54 cases of suspension, 2 dismissals, and 3 cases of corporal punishment.

The dismissals were for theft, the suspensions for poor attendance, misconduct in school and on the play-grounds, and, unhappily, for truancy.

The cases reported as cases of corporal punishment hardly merited the dignity of the term used to describe them.

It will be obvious to you from the above facts that the discipline in our schools has been exceptionally good. I believe no system of schools, embracing over 80 classes can make a more creditable showing. This excellent condition of things is not the result of undue restraints placed upon the freedom of the child, checking all spontaneity, or to the prevalence of iron-clad rules governing the movements of the children. It is due rather to the absence of all motives for wrong doing; it is the result and sure indication of the attractiveness of our school-rooms, of the admirable teaching that makes all work pleasurable to the pupils, of the watchful provision of principals and teachers.

While in general all are so successful, here and there could be found teachers who would allow pupils to exercise their destructive instincts on school books and furniture; who would expect good work from pupils poorly equipped with appliances; who would fail to see the relation that personal cleanliness, neatness, and orderly habits of work bear to mental development; who would wonder at the inattentiveness of five rows while the sixth was "reciting;" who could not solve the problem of preventing one-half the school from forming bad habits of work, while laboring with the other half to inculcate good habits. But such cases have been rare, and I take pleasure in reporting so uniformly excellent discipline.

SCHOOL WORK.

The plan of supervision did not differ materially from that of the past two years. As in previous years, there were frequent inspections of the different kinds of work in all grades, grade meetings, and "sample" lessons.

Believing that in no other way can we so successfully broaden the work or give new methods and new lines of work, as by bringing the teachers together for lessons upon specific subjects, or by grouping in a single room specimens of the best work of each school in a variety of subjects, for the inspection of teachers, I have devoted considerable attention to such lessons and such exhibitions, and I have reason to believe that my efforts were well directed and the time of teachers was well spent. One result of such exhibitions has been the elaboration of several outlines defining in detail the limits of the work, suggesting the most approved methods and indicating to some extent what illustrative matter is best adapted to aid the teacher.

To report in detail upon the work done in the different studies of the course would be to repeat much of what was said in my last report. What was well done last year has been as well done this year. Where there has been no progress there has been no retrogression. Hence, in the following discussion, it will be necessary to consider only any special or new work that may have been done, to criticise what may seem to me to be wrong in the work of individual teachers or unwise in general practice, and to recommend for the coming year new lines of work in the light of the experience of the past year.

Number.—The number work is undoubtedly well done in all grades. There is little to criticise and much to commend. I suggested a year ago that the development work in the lower grades should be supplemented by more drill work in order that the child's knowledge of the facts of number might be positive. Without this certain knowledge accurate and rapid work is impossible. I do not hesitate to say that more of this drill work is needed in all of the lower grades, particularly in the fourth grade. It occurs to me also that carelessness in the *form* of written arithmetical work must often serve to strengthen any bad habits in writing a pupil may have, and materially hinder him from overcoming them.

Reading.—An important part of the work of the first two years of school-life is to teach the child to recognize as many words of his vocabulary as possible, and to train him to aid himself in increasing this vocabulary by means of his knowledge of the powers of letters. This done, it goes without saying that the power to recognize readily groups of words, and the power to grasp readily the thought expressed can be cultivated only by continued and varied practice in reading. The first part of this work is well done; but in the third and fourth grades, where, if anywhere, much reading is absolutely essential, if we would teach our children to read fluently and intelligently, the pupils are practically limited to a small third reader in the one grade, and in the other, to a fourth reader, which, in the hands of the pupils, oftener proves a stumbling-block than an aid. It is true that sets of physiologies are furnished for supplementary reading, but they are of little value, because too difficult. The "Cats and Dogs" are old acquaintances by this time, yet are read profitably by all primary pupils. This is not enough, however, and I believe no one could question the wisdom of expending several hundred dollars in the purchase of books for these grades.

In the higher grades, where the reading is made to contribute to the work in all branches, enough supplementary reading is necessarily done.

During the year many additions have been made to the school libraries. The educational value of the school library cannot be overestimated. Intrinsically, these libraries are worth many thousands of dollars. The question of ownership has of late been frequently a matter

of dispute, and as a result of these disputes many libraries have been dissipated. Often the books are divided among the pupils who have contributed to their purchase; in some instances the books purchased are deeded by the pupils to the teacher; in several cases teachers, by virtue of their efforts in building up the libraries, claim the right to carry them from grade to grade, and from building to building. The feeling that the final destination of a library is uncertain operates often to discourage the efforts many teachers and pupils would make under more favorable circumstances.

Some one should be made responsible for the care and preservation of these libraries. The books should be catalogued and the rules governing their use should be business-like and practical. If you or the board of trustees will make a rule determining definitely the question of ownership and the conditions governing the transfer of libraries, I will gladly undertake the work of perfecting a more business-like and permanent library organization.

Penmanship.—As a rule the pupils of all grades write well. Few of them write easily or rapidly without sacrificing good form. In very many cases the position at the desk is neither comfortable nor graceful, the position of the arm and hand is strained and cramped, the eyes are too near their work, the shoulders bend forward. To say nothing of the physical injury that must be the result of such positions, ease and rapidity in writing is made impossible. I have observed that more time and *thought* is often given relatively to the *form* of the written words than to the structure of the sentences to be put on paper. I believe, in fact, that a great deal of valuable time is often wasted by pupils in their laborious striving after correct form. What to do is a question of some moment. It is important that the form should be good, and equally as important that pupils should write easily and rapidly. To what extent the study of form may be subordinated to the study of correct position is a matter to be carefully considered. Certainly good form should result from careful training in position. I do not believe that the forms of letters should be the first or the most important point considered. I do not believe that our duty is done when we have trained pupils to draw perfect copies in writing books, or that we need trust wholly to the necessities of a later business life for correct training in position and penholding. As long as exercises in penholding, correct position, and movement drills are given without practical reference to their application to the writing of the day, as long as proficiency in these exercises is sought as an *end* and not as a means we can not hope for much improvement.

A more thorough understanding of the relation of this work to the writing is necessary. Teachers should understand that the object of these exercises is the training of the muscles of the hand and the arm; that without this control of the muscles ease and rapidity is impossible; that the *habit* of correct position in writing can only be cultivated by

insisting that all written work be done correctly and by *never* allowing a pupil to lapse into bad practices. In making the above criticism I do not wish to undervalue the excellent work done by teachers in training children to write well.

Spelling.—As heretofore teachers have endeavored to cultivate in pupils the habit of ascertaining the correct form of words before using them. Supplementing this, lists of words have been studied, written, and defined. Where a teacher has succeeded in arousing a genuine feeling of responsibility for the correct spelling of every written word, bad spelling does not exist. Where pupils do not feel this responsibility, where the lists of words to be studied are selected without good judgment, where misspelled words are passed without comment or criticism, there seems to be a most profound indifference on the part of pupils to the orthography of the words used.

I believe there should be oral and written spelling of lists of words, and plenty of it, provided the greatest care and judgment is exercised in the selection of the lists of words. A child can spell so small a part of his vocabulary that the question of what words to study requires the most careful thought.

Geography.—No other branch has been so uniformly well taught as geography. The general plan of work did not materially differ from that inaugurated by our best teachers the year before. To make the work more uniform many grade meetings were held, comprehensive outlines were prepared, and on several occasions the best work in each school of a grade was grouped in a single room for the benefit of the teachers.

It would be impossible in this brief report to mention all the work that merits mention because of its excellence. There can be no question as to the correctness of the principles underlying all of the work done, and there is but little room for adverse criticism of methods. In general, there has been a marked improvement in the character and scope of the illustrative work. In many schools the topical method of study has been substituted for the less reasonable and less orderly plan suggested by the arrangement of the text-books. In all schools there has been much supplementary reading.

By the indefatigable efforts of teachers and pupils pictures without number have been added to the already large collections, and valuable exhibits of products and curiosities have been made. For the purpose of supplementing the text-book work, the value of these collections can not be overestimated, provided they are intelligently used. Pictures placed before the school without some show of orderly arrangement and classification, and selected without reference to the especial work of the day, do little more than furnish amusement for the pupils. I would suggest the wisdom of keeping all illustrative material not needed for the work in hand out of sight.

The requirements of the course in geography make wide reading a

necessity. I have often thought, however, that we may be overdoing the matter and that much harm, as well as much good, may result from too much indiscriminate reading. The meagreness of our school libraries makes it necessary for the child to do much of his reading at home or in public libraries. Libraries suitable for the varied reading required can be found in but few homes, and but few children have access to books outside of the home. Furthermore, few pupils have the power to discriminate wisely between what is important and what is totally irrelevant in their search for information. Fewer still have any knowledge of the sources of information and of the trustworthiness of the authorities quoted. While the purpose of this reading is primarily to gain information, I believe we should not forget to take advantage of the opportunities offered in this work for training pupils in the use of books in independent reading.

I hardly dare to suggest arguments that may tend to check the reading of the pupils after we have striven so hard to break up the slavish dependence upon the meagre statements of a text-book, but I believe that the reading should be largely limited to books specifically referred to by the teacher, and, in these, to specified topics; or at least that the teacher should so familiarize herself with the opportunities her pupils may have for reading and with the kinds of reading they are pursuing, that she may wisely guide those whose efforts might otherwise be misdirected.

This involves thorough preparation on the part of the teacher, and a definite knowledge of the opportunities for reading afforded each child at home. It furthermore makes a good working library absolutely essential, as a majority of the school must depend upon this. To get such a library should be every teacher's aim and ambition. To add to it, when we can, from the public funds seems a duty.

History.—It can not be said that the work in history has been as uniformly good as that in geography. In very many schools it has been equally as good; in others it has been good within narrow limits; in a few it has been little more than a mere hearing of recitations on the part of the teacher, or the memorizing of the dry facts and assertions of the text-book on the part of the pupil, a kind of work that can result in little, if any, intellectual training. This lack of uniformity is not always attributable to the inefficiency of the teacher. In certain schools of the city, where the schools are composed of pupils whose sole training for this historical work has been gained in the school-room, who have no opportunity for broader reading and study than that afforded by the school library, the work cannot be made to compare favorably with that of schools whose pupils, because of their more fortunate lot in life, have greater advantages.

It is only through the agency of the school library that we can hope to make the work in history what it should be in these poorer schools. And yet here, where, if anywhere, the school library is an absolute

necessity, these libraries are so often incomplete as to be practically valueless. There can be no more profitable way of investing any money that may from time to time be available than by providing each of these schools with a good working library.

All that has been said in reference to the reading in geography applies with equal force to the reading in history. I believe there should be less indiscriminate reading and that we should make every effort to train the pupils how to use a library, how to get at sources of information, how to read books profitably, and how to make good use of the information gained.

MANUAL TRAINING.

Two shops and one cooking school were provided for our pupils during the year. So generally do the pupils desire to enter these classes that at least one additional shop and one more cooking school will be needed for the coming year. Sewing was introduced in grades four, five, and six.

At the close of the year I requested each teacher in whose school manual training had been introduced to send me a brief statement indicating what had been accomplished, expressing candidly an opinion as to the value of this work in the school, and proposing any changes or modifications of the course now pursued that the experience of the year might suggest as desirable.

To quote from these reports at length would be unnecessary, as the teachers agree with remarkable unanimity as to the main points under consideration. In the first place, it seems to be quite generally conceded that manual training should occupy an important place in our course of study, and that its introduction has not in any way interfered with the school work, "but, on the contrary, that it has proved the needed complement of such work."

All report that "parents heartily indorse it." Many suggest that "the course should be compulsory." There is a general plea for "larger training schools more centrally located," that the interruption to other work may be reduced to a minimum, and that the time lost in going and coming may be more profitably utilized. Many have hinted at some unwise requirements made by cooking-teachers in note-book work and in home cooking. In sewing it has often been suggested that the plan of teaching be modified so as to allow some general instruction to the entire class, in order that pupils may not be driven to enforced idleness while waiting for individual instruction. It is not necessary for me to say that I heartily concur in the opinions of the teachers as outlined above and indorse their recommendations and suggestions. Before leaving this subject I wish to testify to the excellent work done in the shops by Mr. Sheid and Mr. Schweinhaut, in the cooking school by Miss Keogh, and in the sewing classes by Miss Henry.

In closing my report it is pleasant to be able to say that the teachers generally can not be too highly commended for the excellent work they

have done. I wish here to express to them my appreciation of this, and to thank them for their hearty co-operation and cordial support.

I wish also to take this opportunity to acknowledge my indebtedness to Mr. J. J. Darlington, trustee of the first division, and to you, for the encouragement and support always so freely given.

Very respectfully,

N. D. CRAM,
Supervising Principal.

Mr. W. B. POWELL,
Superintendent of Public Schools.

SECOND DIVISION.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: I have the honor to submit herewith a report of the schools of the second division for the year ending June 30, 1889.

TABLE I.—*Showing school accommodations and distribution of schools.*

Schools.	First grade.	Second grade.	Third grade.	Fourth grade.	Fifth grade.	Sixth grade.	Seventh grade.	Eighth grade.	No. of schools.	No. of rooms.
Seaton	1	1	1	1	2	2	2	2	12	12
Henry	2	2	2	3	2	1	2	1	15	12
Gales	2	2	2	2	2	2	1	1	14	12
Webster	2	2	2	2	1	1	1	1	12	11
Abbot	1	1	1	1	1	2	2	1	10	9
Phelps	2	1	1	1	2	2	0	1	10	8
Morse	1	1	2	1	1	1	1	1	9	8
Twining	1	1	1	1	2	1	1	1	9	8
Blake	1	1	1	2	1	1	1	1	9	8
Total	13	12	13	14	14	13	11	10	100	88

Three new schools were organized during the year, making a total of 100 schools located in 88 rooms. As a consequence there were 24 half-day schools, being an increase of 6 over last year's number.

Table II.—*Showing the location and grades of half-day schools.*

Schools.	First grade.	Second grade.	Third grade.	Total.
Henry	2	2	2	6
Gales	2	2	.....	4
Webster	1	1	.....	2
Abbot	1	1	.....	2
Phelps	2	1	1	4
Morse	1	1	.....	2
Twining	1	1	.....	2
Blake	1	1	.....	2
Total	11	10	3	24

It will be seen from the above table that it was necessary to put three third-grade schools on half time, one at the Phelps and two at the Henry. The crowded condition of the latter school throughout the year would indicate that provision for its relief should be made beyond that now existing.

BUILDINGS.

As indicated in last year's report the buildings are in good sanitary condition. The light and ventilation are generally good, and there has been but little complaint of lack of heat. In the cases where cause for complaint has existed slight changes in the heating apparatus will prevent a recurrence of the trouble.

TABLE III.—*Showing total enrollment, average attendance, and percentage of attendance by months.*

Months.	Total attendance.	Average attendance.	Percentage of attendance.	Months.	Total attendance.	Average attendance.	Percentage of attendance.
September...	5,230	4,664	97.4	February...	5,113	4,459	92.5
October.....	5,249	4,797	95.5	March.....	5,044	4,311	91.0
November...	5,169	4,673	93.8	April.....	4,943	4,255	90.1
December...	5,087	4,543	93.1	May.....	4,789	4,145	91.3
January.....	5,189	4,663	93.4	June.....	4,536	4,075	93.6

The largest aggregate enrollment of pupils was 5,249 in October, an average of 52.4 to each school. The considerable decrease in the percentage of attendance in the spring months is attributable mainly to sickness prevalent at that time.

DISCIPLINE.

Good order and self-restraint have characterized the conduct of the pupils at the different schools. This result has been obtained in part by the efforts of the principals, to whom much credit is due for their judgment and energy in the control of their schools, and by the training in habits of order and self-respect which the pupils have received in the school-room.

It can be said of most of the schools that the order has been all that could be desired. Pupils have been led to be orderly from preference rather than from fear. Of the cases of suspension reported, a number have been on account of absence. A few pupils are responsible for the remainder.

THE TEACHING.

Intelligence and faithfulness have marked the efforts of the teachers in every department of their work. The course of study prescribed for each grade has been followed, giving systematic and definite teaching. The frequent grade meetings held under your directions have materially

assisted the teachers by inspiring them with enthusiasm and giving them broader views of their work.

Number.—In the teaching of number in all the grades there has been a purpose to make the work practical, to avoid involved and intricate problems. The dislike for arithmetic, which dwells in many a pupil's mind, has been dispelled and the subject made attractive by his being permitted to make examples for himself. This practice, begun in the lower grades with much success, has been generally kept up in the higher grades. Success in teaching number depends largely upon the pupil's interest being kept alive, and the schools which have been least successful are those where the work has been mere drill work. Of these the number is small and the work in general has been good.

Language.—The work in language was varied in kind, and extensive in quantity. It has entered every lesson taught. One of the most noticeable results of this work is found in the accuracy of expression on the part of the pupils in oral recitation.

The writing of compositions has received careful attention in every grade. It has been the aim of the teaching to train the pupils in the orderly expressions of thought.

To accomplish this result there has been much writing, the work of the grade affording themes for composition.

Reading.—In the lower grades the reading has been confined mainly to the reading books of the grade and to supplemental readers which are furnished for that purpose. The work in these grades has been excellent. In the higher grades the reading has been wide in range, being for the purpose of imformation in connection with the work in history or geography.

Geography.—In teaching geography much use has been made of illustrative matter, charts, maps, products, pictures, and in many cases of articles from the place or country under consideration. Much of this illustrative matter has been furnished by the pupils themselves. The study of representative cities, of the conditions and occupations of the people, has been a characteristic feature of the work.

History.—History has been studied by topics in most schools. There has been but little reciting "from the book." The pupils have been encouraged in bringing histories from their homes, and in many schools nearly every pupil has had a book of reference beside the text-book of the grade. The teachers have shown much discrimination in guiding the work, directing the pupils to sources of information and keeping their efforts confined to definite lines. In the eighth grade, the Constitution has been thoroughly studied and the work in civil government has received proper attention.

MANUAL TRAINING.

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MANUAL TRAINING.

Increased facilities for the work in manual training were afforded by the opening of a new school at 220 K street, northwest, at the beginning

of the year. This made it possible to form classes in the seventh, as well as in the eighth grade. A large proportion of the boys in each of these grades availed themselves of this opportunity and received two hours' instruction each week at the benches in the work-shops. The interest thus shown at the beginning of the year was maintained, and satisfactory progress was reported by the teachers at each school.

COOKING.

A new school in cooking was also opened at the K street building. Last year but one class in cooking was formed. This year's classes were formed in all of the girls' schools of the seventh and eighth grades. Practical work was done by the pupils in the cooking schools, and many were prompted to efforts in the same line at home. A display of pupils' cooking was a conspicuous feature of the exhibit in the seventh and eighth grades at the close of the year.

SEWING.

Lessons have been given to the girls of the fourth, fifth, and sixth grades during the year. This work has been done by teachers who visit the classes weekly. Many of the pupils have here received their first instruction in the use of the needle. Upon making the inquiry late in the year it was found that a considerable number of the pupils had acquired sufficient proficiency in sewing to be of assistance in the home sewing.

Illness compelled Mr. Gage last January to withdraw for a while from his duties as supervising principal of this division and to seek health and strength in rest and travel.

The announcement was received with sincere regret by all the teachers. During his long service in this division Mr. Gage has won the esteem of all those associated with him by his integrity of character, conscientiousness in the discharge of the duties of his office, and by his uniform thoughtfulness and consideration. A speedy restoration to health and his return to his duties is the wish of all.

In closing I desire to express my obligations to the teachers for their hearty and cheerful coöperation in all the school work, to Mr. John W. Ross, trustee of this division, for his counsel and support, and to you for the courteous treatment which I have received in all our official relations.

Very respectfully,

C. S. CLARK,
Supervising Principal.

Mr. W. B. POWELL,
Superintendent of Public Schools.

THIRD DIVISION.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: I have the honor to submit the following report of the schools of the third division for the year just ended:

Number of schools.

First grade	15
Second grade	14
Third grade	13
Fourth grade	13
Fifth grade	13
Sixth grade	11
Seventh grade	8
Eighth grade	6
Total	93

There were 5 new schools, namely, a first grade, a fourth grade, and a sixth grade at the Blair, a second at the Brent, and an eighth at the Maury.

The largest total enrollment for any one month was in October, being 4,778. This was an increase over that of last year of 369, and an average of 51.3 pupils to each teacher.

The following table shows how the schools were distributed:

Buildings.	First grade.	Second grade.	Third grade.	Fourth grade.	Fifth grade.	Sixth grade.	Seventh grade.	Eighth grade.	No. of schools.	No. of rooms.
Wallach	.....	.....	.....	2	3	2	3	2	12	12
Peabody	2	1	2	1	2	2	1	2	13	12
Carberry	1	2	1	2	1	1	1	.....	9	8
Blair	.....	1	2	2	2	2	1	.....	10	8
Eighth and I, northeast	3	1	.....	.....	.....	.....	.....	.....	4	2
Maury	1	1	1	1	1	1	1	1	8	8
Towers	1	1	1	1	1	1	1	1	8	8
Brent	2	2	2	2	2	1	.....	.....	11	8
Cranch	3	2	2	1	.....	.....	.....	.....	8	6
McCormick	1	1	1	1	.....	.....	.....	.....	4	4
Fifth and Virginia avenue, southeast	.....	.....	.....	.....	1	1	.....	.....	2	2
Lenox	.....	1	1	.....	.....	.....	.....	.....	2	2
Seventh and G, southeast	1	1	.....	.....	.....	.....	.....	.....	2	2
Total	15	14	13	13	13	11	8	6	93	82

The following table shows the location and grade of half-day schools:

Buildings.	First grade.	Second grade.	Third grade.	Total.
Peabody	2	.....	.....	2
Carberry	1	1	.....	2
Blair	.....	1	1	2
Eighth and I, northeast	3	1	.....	4
Brent	2	2	2	6
Cranch	3	1	.....	4
Total	11	6	3	20

The following table shows the sanitary condition of buildings:

Owned buildings.

Buildings.	No. of rooms.	Light.	Ventilation.	Water-closets.
Wallach	12	Excellent	None	Excellent.
Peabody	12	do	Excellent	Do.
Carberry	8	do	do	Do.
Blair	8	do	Fair	Do.
Maury	8	do	Excellent	Do.
Towers	8	do	do	Do.
Brent	8	do	Fair	Do.
Cranch	6	do	Bad	Do.
McCormick	4	do	None	Bad.
Lenox	2	Fair	do	Do.
Seventh and G, southeast	2	Bad	do	Fair.
Total	78			

Rented buildings.

Fifth and Virginia avenue, southeast	2	Fair	None	Bad.
Eighth and I, northeast	2	Excellent	do	Do.
Total	4			

A study of the above tables shows that while there were five more schools, there was no increase in the number of owned school-rooms. This made it necessary to rent two rooms at the corner of Eighth and I streets, northeast. This did not meet all demands, however, for it will be observed that the number of half-day schools was greater than last year. This number will be materially reduced when the Madison building is completed in January, 1890.

I again call your attention to the poor ventilation of the Wallach and Cranch schools. In my last report I described with some detail the original plan of ventilating the former building, and showed how that plan had become inoperative. I recur to it to urge the importance of providing in some way adequate means of introducing pure air into and exhausting foul air from these school-rooms.

If there were not other forcible reasons for doing this, the fact that these school-rooms are much smaller than those of the new buildings and therefore become foul much more quickly, and that the schools are usually crowded, should plead strongly for something to be done without delay.

Aside from this, other improvements should be made in this building, which is the least modern of all our school-houses and is falling into decay.

Ventilating shafts should be built; the now damp, dark, and noxious cellar should be concreted and fitted up for play-rooms; fire-proof stairways should be put in; a teacher's retiring-room and suitable cloak-rooms for pupils should be supplied, and the extensive grounds, whose present dilapidated aspect is an offense to the eye of every passing citizen, should be improved.

The Cranch school is provided with a system of ventilation which for some reason does not effect a change of air in the school-rooms. Perhaps the fault is not with the system, but with the size of the flues or registers.

ATTENDANCE AND DISCIPLINE.

The attendance has varied but little from that of recent years. Cases of truancy still occur, but they are relatively few. At the end of October I ascertained that up to that time there had been 39 cases of absence without the knowledge of parents. All were boys. As the total membership was then over 4,700, it is seen that the percentage of truancy is small. I learned that about 11 of the boys so absenting themselves might be classed as chronic truants, whose parents are powerless to compel their presence at school.

One of the number is now in the Reform School, and others have drifted away from the schools.

I again call attention to the prevalence of cigarette-smoking among boys of all grades. Unhappily, the teachers' authority covers only the school premises. It is to be hoped that Congress will pass a law punishing dealers for selling cigarettes to minors.

THE COURSE OF STUDY.

I have little to suggest regarding the work of the school-room, because there has been little or no change in the methods pursued by the teachers or in the subjects of study from those indicated in my last report.

Without taking up each study in detail, I may say in a single sentence that a substantial advance was made in the teaching of history, arithmetic, composition, and geography during the past year, the most notable in my view being the work in history and composition.

Reading was taught in the first three grades better than in the previous year, and a still greater advance will be observed in primary reading when the teachers make free use of the elementary sounds as an aid to word calling.

In the grades above those named I think the teachers are to be commended for their good judgment in the selection of matter within the child's comprehension, and useful in supplementing other studies. In the study of history great stress has been laid upon the use by the pupils of books of reference in looking up material to reinforce the necessarily brief statements of the text-book.

The value of this sort of work is of course not in the facts learned, but in the acquirement of a method of study.

With a view of learning something of the home facilities of the pupils for getting information not in the text-books, I put certain queries to the teachers of schools above the second grade.

These with the replies I give below. They represent 58 schools and about 2,700 pupils.

(1) How many pupils in your school have access to reference books at home?—Answer. One thousand three hundred and eighty-six.

(2) How many have cyclopædias at home?—Answer. Seven hundred and sixteen.

(3) How many books on the teacher's desk or in the school library are in daily use for reference in history or geography?—Answer. One thousand four hundred and eighty-eight.

It thus appears that nearly 50 per cent. of all the pupils in grades engaged in studying history or geography have no books at home to aid them in supplying information not furnished by the meager text-books.

This shows the importance of having such books on the teacher's table accessible to every one. Most of our teachers, with the limited resources at hand, have shown much discrimination in the selection and use of books, but there is still some haphazard work here, as in every partment of teaching.

On the whole, however, no feature of our schools promises better things than the widespread and increasing desire of the pupils for good books.

It is a familiar sight on going into a school-room to find a leisure half-hour employed by the children in eagerly poring over books from the teacher's desk or the school library.

The problem now presented is how to inspire that small minority who do not care for books and will not read them with a love for reading.

MANUAL TRAINING.

Manual training is being fairly tested in all grades of our schools. Its forms are carpentry, cooking, sewing, molding, drawing, map-making, writing, model-making, and paper-folding, besides numerous varieties of seat-work in the first two grades. The work in wood, elementary and limited as it must be when made a part of the daily course, has so far yielded good results in the interest maintained, the skill acquired, and the excellent products exhibited.

The feature of all the new work that has most attracted my notice is the marked cheerfulness with which it is attempted by the children, without exception, a cheerfulness which borders on enthusiasm and

renders the work of the teachers of these special branches most agreeable.

I must also commend the friendly spirit of the teachers and their untiring efforts to make manual training a success.

In order to know whether the skill and knowledge obtained in the shop, the kitchen, and the sewing class bore practical fruit at home, in the latter part of May I asked the following questions, with the results given below:

(1) How many pupils are in the sewing class?—Answer. Eight hundred and sixty-four.

(2) Of these, how many do practical sewing at home, in making or mending clothing, patching, darning, etc.?—Answer. Six hundred and twenty.

(3) How many pupils are in the classes in cooking?—Answer. One hundred and twenty-five.

(4) Of these, how many do cooking at home, in preparing meals, single dishes or desserts, or assist in the same?—Answer. One hundred and eighteen.

(5) How many pupils in the shop?—Answer. One hundred and twenty-seven.

(6) Of these, how many have applied the instruction there gained to any sort of useful work at home?—Answer. Eighty-nine.

These figures were obtained late in the year, within a few weeks of the close of school, so that the numbers reported in the various classes are far below the average, but this does not diminish the significance of the facts.

It will be seen that 83 per cent. of all who were taught sewing, 96 per cent. of all who were taught cooking, and 70 per cent. of all who were taught carpentry applied their knowledge at home.

Assuming that the ratio would be about the same for the entire community, it is a pleasant reflection that thousands of youthful hands, otherwise idle, are busy everywhere doing useful things and doing them intelligently and for the love of the work. The significance of all this activity is not in the worth of the things done, but in the spirit of cheerful labor disseminated, the wholesome respect thus bred in the child for every form of manual toil, and that complementary influence of all artistic handcraft upon mental action which no rod can measure, no plummet can sound, and yet which every observant teacher sometime discovers.

I anticipate in the coming year an increase of from 75 to 100 per cent. in the classes in cookery and wood-working owing to the contemplated establishment of a new cooking school and a new shop in the southeastern section, which has hitherto had neither.

AN EASTERN HIGH SCHOOL.

I think the time has come when a high school should be located on Capitol Hill. My reasons are these: In 1887, 106 pupils were transferred from our eighth-grade schools to the Washington High School, in 1888, 131, and in 1889, 127, making in all for three years 364, of whom 139 were boys and 225 were girls. I estimate the number to be transferred from the third division at the end of the current school year at 150. This number will increase from year to year.

It is seen therefore that we have in the classes of three years the material in East Washington for a high school of nearly 400 pupils.

The fine square of ground occupied in part by the Wallach and Towers schools affords an ample site for such a school without cost to the District.

The Washington High School long ago reached the limit of its capacity, and I am informed that its present unwieldy membership of 1,400, drawn from the extreme limits of the District of Columbia, will quite absorb the school-room space now being added. If so, a return to the half-day system can be a question of only a year or two.

Dr. Lane in his last report says:

> With the utmost crowding the assembly hall will not contain the entire school when it is desirable to meet for general exercises. The lecture-rooms and laboratories are so cramped that the work in natural science and physics is materially restricted. * * * The capacity of the present elastic building is reached.

I am convinced that many children from East Washington, who are now obliged to withdraw from the High School on account of the great distance and the expense of railroad travel, would complete the course if a school were located in their own section.

But there are other considerations. In your last report you said, in speaking of the High School:

> It is unfortunate that this school should be considered in the light of one separated from the graded schools. It ought not to be so considered. It is not such in fact. The grades of the High School are but a continuation of the graded system, beginning in the school for the child of six years.

Does not the massing of all the graduates of our local grammar schools, in a single institution remote from their homes, tend to break this desired unity of the different members of the graded system? Especially is this true if there is at the same time any violent transition in methods of teaching or in standards set up in the High School from those in vogue in the grades below.

The pupils who go out from our grammar schools year after year are at best but boys and girls—many of them boys in knickerbockers and girls in their teens, whose reasoning powers are only fairly budding and who can not be said to have finished the common English branches.

It can not be disguised that they look upon their promotion to the High School as a longer and harder stride than any they have ever before taken, and this at that stage in their physical life when any violent strain or shock may permanently cripple mind and body.

It has repeatedly been brought to the attention of our eighth-grade teachers that the faculty of the High School challenge the qualifications of their transfers in certain studies.

As before stated, the number of pupils transferred in 1888 to the Washington High School from the five eighth-grade schools of this division was 131.

Of these, at the end of the first quarter, 56 were reported by the principal as having "failed" in from one to four studies. These pupils

had come from teachers of experience and good sense. They were children who had passed, without forcing, successively from grade to grade, and had at last taken their places in the High School.

In promoting them the grammar-school teachers said: "These pupils have done well enough in our schools to merit advancement. We do not say they are qualified to do the work of the High School, but, speaking after the manner of teachers in all grades below us, we say they are ready for the *next grade.*" Over 40 per cent. of them were reported as having failed at the end of the first quarter.

Now, as they were not in the main reviewing old studies, but pursuing new ones, and as they were not the transfers of a single inefficient teacher, but of five capable ones, my inference is that there is a wider gap than there ought to be between the eighth grade and the High School, wider than that between any other two grades.

This may consist in—

(*a*) Widely different methods of presenting subjects of study.
(*b*) Higher or more inflexible standards of rating.
(*c*) Too difficult studies in the first year.
(*d*) All the above combined.

Certain it is that something ought to be done to bring the graded system and the High School within hailing distance of each other.

I should scarcely be just to Dr. Lane, the accomplished principal of that institution, if I omitted to say, that since his incumbency no one has been more honest and untiring in efforts to bring the High School within range of the grammar schools than he.

What I have said with regard to the present attitude of the High School points to the inevitable tendency of all such centralized schools to soon get away from the spirit and motive of the general school system and to set up for themselves.

It also incidentally furnishes me with an argument for smaller local schools, planted in convenient places, to supplement directly the work of the grade schools, and to give pupils a chance to get a high-school education nearer home.

The advantages and losses, respectively, of a central institution of high repute, but overcrowded and remote, and a local school, accessible and less pretentious, may be stated as follows:

A central High School.

ADVANTAGES.	LOSSES.
1. Institutional pride as an incentive to the best effort by pupils.	1. Diminished influence of the teachers' personality.
2. The necessary cultivation of self-dependence by pupils in order to hold their own with many competitors.	2. Probability of radical changes in methods and standards from those of the graded schools.
3. Superior appliances, libraries, laboratories, etc.	
4. Economy.	

A local school.

1. Accessibility.	1. Restricted facilities for library and laboratory work.
2. Closer union and sympathy with the lower grades and with the people.	2. Expense.
3. Continued influence of the teachers' personality.	

In closing I desire to thank you for your fairness and good will in all matters concerning the schools of this division, and also Trustee J. W. Whelpley, for his watchful care over our schools and his keen interest in everything looking toward their improvement. Most of all it is my wish to bear witness to the unflagging industry, intelligence, and loyalty of the teachers of the third division.

If I could, without disparaging the faithful work of all, select individuals as meriting especial praise, I would name those who toil, day in and day out, in less favored localities with crowded schools, a large part of whose humble membership get their only daily lessons in refinement and morality from the teacher's living example.

Very respectfully,

A. T. STUART,
Supervising Principal.

Mr. W. B. POWELL,
Superintendent of Public Schools.

FOURTH DIVISION.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: I herewith respectfully submit you a report of the condition of the schools of the fourth division for the year ending June 30, 1889.

The tables of statistics following are intended to exhibit some of the phases of advancement or decline in the enrollment, attendance, and general character of the schools as clearly as they can be shown by the use of words and figures.

Those things, however, which are of the greatest importance to pupils attending the schools can not be expressed by tables of statistics. They can not be computed by the use of figures.

Much of the work of the schools awaits development in the after life of the scholars. If the work which is done in the schools is of the right character in its mental and moral qualities we shall not be disappointed in the expectation of having an industrious and upright community of men and women. Therefore the qualities of mind displayed by men and women in the various departments of life must be taken into consideration in estimating the work done in schools.

It is the business of the schools to impart such instruction as will lead to the formation of correct habits in the pupils, and these when once formed will in general be found to adhere through life. Thus we perceive that many of the qualities which enter into the composition of intelligent, patriotic, and useful citizens can not be estimated by tables of percentages as we can estimate the enrollment and attendance of the pupils.

Number of schools.

First grade	8
Second grade	7
Third grade	8
Fourth grade	7
Fifth grade	7
Sixth grade	6
Seventh grade	4
Eighth grade	3
Total	50

SCHOOL ACCOMMODATIONS.

TABLE I.—*Showing distribution of schools by buildings.*

Buildings.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Total.
Jefferson	2	3	5	4	2	1	1	2	20
Amidon	.....	.....	.....	1	2	3	2	1	9
Bradley	1	1	1	1	1	1	1	2	9
Potomac	.....	.....	.....	1	1	1	1	1	5
Greenleaf	.....	.....	.....	.....	1	2	2	2	7
Total	3	4	6	7	7	8	7	8	50

TABLE II.—*Showing attendance and other facts.*

Months.	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Percentage of attendance.	Schools.	Pupils to school based on—		Cases of tardiness.
						Whole enrollment.	Average enrollment.	
September	2,516	2,387	2,304	97.0	50	50.3	47.7	42
October	2,583	2,465	2,338	94.9	50	51.6	49.3	225
November	2,549	2,427	2,273	93.6	50	50.9	48.5	280
December	2,616	2,384	2,227	93.4	50	52.3	47.7	200
January	2,565	2,442	2,284	93.5	50	51.3	48.8	317
February	2,524	2,426	2,284	93.6	50	50.4	48.5	265
March	2,512	2,392	2,194	92.0	50	50.2	47.8	249
April	2,471	2,363	2,153	91.4	50	49.4	47.2	185
May	2,401	2,273	2,077	91.3	50	48.0	45.4	198
June	2,323	2,236	2,101	93.9	50	46.4	44.4	90

ATTENDANCE.

A comparison of the above table with the corresponding one in your report of last year shows great improvement, especially in the number of cases of tardiness.

To the principals and teachers should be given much credit for this excellence, for by their faithfulness, loyalty, and cheerful co-operation with me the results were obtained.

Yet it is a lamentable truth that many boys, and it may be girls, are growing up in idleness and ignorance in this division. They are forming habits of viciousness, and are being educated for every degree of crime. Some of these boys are the sons of apparently respectable peo ple who have seemingly lost all control over them. Cases of this kind have been brought to my notice, therefore I am not speaking altogether at random.

Some of this class, when they did attend school for a brief period, chafed under the regulations, disobeyed all reasonable rules, and when called to account, left the school for good. In all this they were sustained seemingly by the parents. Now, what can or shall be done to compel these idle, ignorant, and unrestrained boys to attend school? My answer is a law, and to make it effective, is a provision for the appointment of an officer, vested with police powers, on whom the enforcement of the law shall be made to depend.

ORDER AND DISCIPLINE.

The order in the school-room has been good. There have been very few exceptions to the rule, and the discipline of the pupils has been and is generally commendable.

This good order and discipline have been maintained without recourse to corporal punishment, except possibly in a few instances. This means of enforcing obedience is resorted to only in exceptional cases, of which the number is very small. The number of suspensions for misconduct is also small The inculcation of good morals and manners, and the influence and example of conscientious teachers are the means by which order and discipline are secured and maintained.

By order is meant a quiet, regular behavior in the school-room and in the school-house during the school session. It includes a methodical arrangement of the movement of pupils, individually, and in classes, to and from their seats, in the halls, and on the stair-ways; and a methodical arrangement of books, papers, slates, and other school appliances used by the pupils.

By discipline is meant a proper subjection to rules, regulations, and precepts for the government of the pupils' conduct in the school-house and on the school-grounds; on the streets while going to or returning from school, and a proper regard for the protection and preservation of public and private property.

A pupil well disciplined may be depended upon to respect the regulations to be observed in all public places, whether in the school, at church, or at other places where the young congregate.

STUDIES.

Reading.—As reading is first, so it is the most important in the list of studies. The reading in the schools, it seems to me, is not, in all respects, as good as it might be. Some classes read well, and the instruction given by their teachers is such as we might expect from intelligent teachers. But it is not so in all classes. A pupil who can not talk intelligently can not read intelligently. He should therefore be encouraged to talk, and should be instructed how to do so properly. Here and there is a teacher who has not yet learned that the pupils should do most of the talking, and that the teacher should observe silence except when it is necessary that she should speak. Contrary to this, teachers of this class do all the talking, and so incessant is it, that in some cases it is a constant annoyance to the pupils and to every one who enters the school-room.

More instruction was given in the phonetic elements of the letters of the alphabet, in articulation, and in pronunciation during the year than in previous years, and good results followed. I look for great advancement the coming year.

Spelling.—From an examination which I have made of many written exercises during the year it is clear that the spelling in our schools is good.

Language.—The oral instruction which is given in the study of language in the primary grades has been regarded as an excellent preparation for the study of grammar in the more advanced grades. In this preparatory work pupils are instructed how to use language in spelling and in writing by appeals to the ear rather than by rules of grammar.

The results obtained from its teaching are very satisfactory.

Number.—In this study the results obtained are very satisfactory. Teachers are earnestly trying to carry out your ideas that what children most need is such a knowledge of arithmetic as will enable them to perform accurately and with reasonable facility such arithmetical calculations as occur in the ordinary affairs of men. The study of fractions, confined to simple process, is begun in the primary grades with an interest keenly alive to the subject on the part of the teacher; the knowledge gained in a brief period is surprising, and the work required to be done is as rapidly performed as in whole numbers. Throughout the course mental arithmetic is combined with the written work.

Geography and History.—There has been a marked improvement in method in the teaching of these studies during the past year by many teachers. In some of the schools the results of the instruction were

spoken of in terms of high praise. In others they were not quite up to the standard.

Penmanship.—Specimens of writing executed by the pupils near the close of the school year in June, when compared with specimens by the same pupils taken at the beginning of the year in September previous, show a very decided improvement in the best characteristics of good penmanship.

MANUAL TRAINING.

Industrial education is the missing link in our educational system. As to the effect of manual training in the public schools upon the regular school work, I consider that the results go far to prove that it is so great a relief to the iteration of school work that it is a positive benefit.

One hundred and twenty eight boys from the seventh and eighth grades, in classes of twelve, received instruction in this important study, under the guidance of Mr. A. B. Fairbanks.

Following are extracts from the statements of different teachers:

Mr. R. L. Johns (eighth grade) says:

After another year's trial I am the more confident that *the shop* is an important department of the school work.

The interest manifested by the pupils has not abated and their work shows considerable advancement. As to its influence on their studies, I think it leads to greater accuracy and a more careful observation of the true relations of things. One of its grandest teachings, and so necessary in these days, is the nobility of manual labor. 'Tis very well that the work of the brain and the work of the hand should be placed side by side.

Mrs. M. E. Martin (eighth grade) says:

I consider the manual training work as one of the school studies.

It has not, as far as I have been able to judge, interfered with the other work of my pupils.

Mrs. S. E. Wise (seventh grade) says:

I consider the manual training work as one of the school studies. It has not, so far as I have been able to judge, interfered with other work of my pupils.

Miss C. L. Wilson (seventh grade) says:

I believe that whatever trains the hand of a child is of advantage to him, not only in that particular line of work, but in others as well. The cooking and carpentering classes are generally liked by both parents and pupils, and usually would interfere very little in the work of the regular teacher. Still, when both are taken in the same school, I consider it a decided disadvantage to have them occur on different days, as then there are two broken days from regular work in every week. A certain amount of variety in school-work is an advan tage, but too much distracts attention.

Miss S. A. Langley (seventh grade) says:

The exercises of the manual training and cooking classes have helped to develop habits of industry and usefulness, both at home and at school. Pupils enjoy the change from the school routine, and as far as I have been able to ascertain, parents are entirely satisfied with the results.

SEWING.

Sewing was taught during the year in the fourth, fifth, and sixth grades to about 550 pupils in fourteen different schools under the charge of Mrs. Weaver. My observation of this useful branch of education was that the girls took great pleasure in their work, and in exhibiting it to their friends, and that their mothers, whose time is fully occupied with domestic cares or with society, regard the instruction as of the highest importance for their daughters. In June I requested of the teacher in charge a statement of the standing of the different schools in sewing. The following is a copy, commencing with the month of February:

Month.	Whole number on the roll.	Average number present.	Average number absent.	Average number on roll per school.	Average number present per school.	Average number absent per school.
February	546	498	47	39	35	3.4
March	542	489	52	38	34	3.7
April	527	479	49	37	34	3.5
May	504	460	40	36	32	2.9
June	497	454	42	35	32	3.0

I also requested reports of the teachers in whose schools sewing was taught.

Following are extracts from said reports:

SIXTH GRADE.

Mr. P. S. Lesh says:

The instruction in sewing, as far as I have been able to judge, has been a very satisfactory feature of the course. The girls manifested great interest in the work. Quite a number report that their lessons in school have enabled them to do work for their parents at home, which they could not have done without this instruction. Nearly all have heard this feature of the school mentioned at home in terms of praise, and no adverse criticisms have been heard. In my opinion, the hour a week devoted to this work is time most profitably spent.

Miss F. M. Moore says:

Sewing has now been taught successfully in my school for two years, and has given entire satisfaction. Each child is capable of putting on a patch and working a good button hole, besides doing ordinary plain sewing.

Miss M. P. Wilson says:

Judging from my own school, the introduction of sewing has been a success. It is much liked by both parents and pupils, and the work accomplished proves it a valuable addition to the course of study.

Miss S. C. Dulin says:

I am very much pleased with the earnestness shown by my pupils in their work, and the improvement made during the term leads me to think the introduction of sewing has been a success.

FIFTH GRADE.

Miss S. E. Halley says:

This year's work has shown a steady improvement in sewing. Besides continuing practice in the work of last year, my school has completed square and circular patches,

and have had some practice in button-hole stitching. There is no lack of interest shown. The children still look forward to the sewing hour with pleasure.

Mr. J. G. Falck says:

I find a decided improvement in the work of the girls this year over last year, and am pleased to state that not only the pupils but also the parents take a deep interest in this branch of work.

Miss M. L. Strobel says:

The pupils of my school have not manifested as much interest in sewing as those of last year; yet the work has been generally well done.

Miss M. C. Johnson says:

I think having sewing in the schools a good thing. This year I find the girls quite interested and making great improvement.

Miss M. L. Smith says:

Sewing has been very satisfactory in my school. Parents and pupils have been much interested in the work.

FOURTH GRADE.

Miss H. L. Davis says:

The introduction of sewing into the public schools has proved a grand success. The work is much better than that of last year. The parents, too, have become much interested and are always willing to furnish the required materials, and to prove their appreciation of this useful accomplishment have sent testimonials of appreciation.

Miss E. E. Haliday says:

My girls, with one exception, are delighted with their sewing. Parents are quite anxious to have them continue.

Mrs. A. M. Hobbs says:

I consider the hour given to sewing in my room to be most profitably spent. Parents have expressed themselves as being much pleased with the results accomplished.

Miss M. W. Anderson says:

More than two-thirds of the pupils in my school had not been taught to sew before taking it up this year in school. All have learned to sew nicely, many of them doing excellent work. The work was exhibited to-day in the school-room and carefully examined by parents, who were very much pleased.

Miss R. A. Garrett says:

Sewing in my school was well taught during the year. The children seemed much interested in the work. Many different articles of clothing were made. During the "industrial exhibit" parents and friends highly commended this branch of our work.

COOKING.

In this division there were 180 girls in classes of 15, taught by Miss Henrietta Schlerf, who received their first lessons in cookery. The introduction of cooking into the public schools of this division being an experiment, I watched its progress during the year with interest. From my frequent visits to the cooking school, I was satisfied that these girls' time could not be better employed.

Below are extracts from the different teachers.

Mrs. M. E. Martin says:

Many parents with whom I have conversed appreciate the opportunity offered to their daughters, and are pleased to see the interest taken by the girls in this most important branch of home life.

Miss Annie Van Horn says:

In reference to the "cooking department," the good accomplished and the benefit of the experience given, can be appreciated only by those who are interested and who have made visits to the school. I consider the hour here spent a practical recreation, from which the pupils return with renewed energy for study.

Miss E. J. Riley says:

The hour devoted to the "cooking class" is looked forward to with eager impatience, and the time thus occupied is, in my judgment, profitably spent, as I learn it has made many of my pupils very helpful in their respective homes.

Before closing I desire to refer to the death of Mrs. S. H. Allen, one of our most faithful teachers, which occurred on the 17th day of May, 1889. Her death was deeply deplored by her co-teachers, as well as by pupils and parents to whom she had become endeared by her many good qualities.

In conclusion it gives me pleasure to tender my sincere thanks to the teachers for the uniform courtesy, support, and co-operation which I have received from them; to Trustee R. A. Fish for his deep interest in the public schools of South Washington, and to yourself, for your invaluable counsel and kind indulgence.

Very respectfully,

ISAAC FAIRBROTHER,
Supervising Principal.

Mr. W. B. POWELL,
Superintendent of Public Schools.

FIFTH DIVISION.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: In closing the school year 1888–'89, I beg leave to tender this, my annual report, with a feeling that the year has been well spent, and that the work required by the Board of Trustees has been well done, and with the gratifying belief that "each to-morrow finds us farther than to-day."

The schools of my division are, as a whole, in a better condition at the close of this year than they have ever been before.

The increased interest and the evidence of more thorough research on the part of most of the teachers has been very gratifying, yet an improvement in this particular on the part of some is desirable.

The percentage of attendance has again this year been reduced by numerous cases of contagious diseases and the great number of rainy days, though it has not affected to any serious extent.

We have been obliged to take a step backward in regard to half-day schools owing to the destruction of the old Montgomery street building in order to make place for a new 8 room school, which necessitated the putting of eight schools on half-time.

SCHOOL WORK.

The plan of supervision has not been changed from the usual custom and I do not see how it could be materially improved. The cooperation of the superintendent, supervising principal, and teachers has been thorough, resulting in a clear understanding of the various parts of the course of study.

The deep interest heretofore shown by most teachers in grade meetings, whether called by yourself at the Franklin, or by the supervising principal at the Curtis School, has not abated. Requests from teachers for these meetings after school hours are frequent, and they have proven of inestimable value.

Many times I have seen, at the close of one of these little meetings, satisfaction on the face of an earnest teacher, because of the rolling away of some impassable stone from her pathway.

We have had a number of model lessons during the year, in addition to those at the Franklin, which have been advantageous.

Number.—I think that no other part of the "Course of Study," perhaps, has been so well taught as this. The manuals for the lower grades and the broader course for the upper grades have been closely observed and fine results have followed. Teachers are anxious to have, and are constantly looking for, better methods, and as a result it must follow that the time required for a reasonable education in arithmetic must be perceptibly shortened.

Reading.—Our aim has been, and with a good degree of success, to awaken a deeper interest on the part of the pupils by introducing much new, supplementary matter in the shape of new books relating directly to the subjects under discussion, in order that the vocabularies of the children may be extended and that they may the more readily imbibe the thought contained in the prescribed text.

More attention has been paid to the teaching of consonant sounds in the lower grades than formerly, and good results are plainly seen, better perhaps than in the higher grades, and the same might be said of spelling, though good work is done in this branch throughout the grades.

The one thing most needed to increase the efficiency of the schools in reading is an increased supply of supplementary readers for the third, fourth, and fifth grades, bearing upon miscellaneous subjects, and a variety of works treating on geography and history for the sixth, seventh, and eighth grades.

In the other branches excellent work has been done, of which there seems to be no need of special mention.

DISCIPLINE.

We have little trouble with the discipline; that is in the general behavior of the pupils in school few cases of violation of order arise which can not be managed by the teacher in co-operation with the parent.

Disorderly schools are rare but exist in one or two instances. Such are found in the rooms of those teachers who come to school without a definite idea as to a programme for their day's work, and without having properly prepared that which it is proposed to teach.

The fact that we are compelled to use the old-fashioned combined furniture, which is either too large or too small, and necessarily causes discomfort, the direct result of which is restlessness and inattention, is lamentable.

Suspensions, corporal punishments, and dismissals are rare and are becoming more so.

The habit of detaining pupils after school or during recesses as punishment for misconduct or poorly recited lessons has fallen off greatly. Those teachers who produce the best results are those who do the least "keeping in."

Truancy occurs much too frequently. To bring about an abolition of this great evil seems to be difficult without the aid of a special truant officer, who should be appointed at the earliest possible moment.

The disappearance of books, pencils, etc., from pupils' desks is also of much too frequent occurrence. Sometimes detections are brought about, but the remedy has not yet become apparent, unless it be in the furnishing of all books and necessary appliances by the Government to all pupils of the public schools.

MORAL TRAINING.

The requirements of the Board of Trustees of the teachers in regard to this very important subject should, in my opinion, be extended and more clearly defined.

In my rounds of supervision cases of difference between pupils frequently arise, and upon questioning the teachers as to the amount of care extended in such cases I have found that instead of a patient investigation and a just decision as to how much of the cause is due to No. 1, and how much is due to No. 2, and as to what is due from either in the way of amends, it is too frequently the case that one or both of the parties are sent home with a "suspension paper," the result of which is in almost every instance that a separate trial is had by the parents of each boy, a favorable verdict rendered for the defendant in the case of each, the other disgraced, and the teacher censured for the whole thing.

Upon inquiring why this is so, the universal reply is, "I have not the time to spend on such things. It takes every minute I can get to carry out the requirements of the Board."

SCHOOL LIBRARIES.

This, in my estimation, is a most important subject. The question as to whether the minds of our boys and girls are to become, to any extent, purified and turned from the attractive yet pernicious literature, which is luringly spread out to them on every hand, depends to a very great extent upon the efforts of the teachers of the public schools in this direction, and precept and advice may be offered, *ad infinitum*, without beneficial effect unless there is something better to offer as a substitute, in the school libraries, close at hand.

The good results of these libraries are already plainly visible. Many boys in whose possession in the school-room have been found dime novels, Police Gazettes, and numerous other things as bad, may now be seen eagerly poring over books from the school libraries, which have been selected with great care and placed before them as wholesome and attractive literary food.

The strenuous efforts extended by many of the teachers in securing these books is evidence of their appreciation of the importance of the work.

The following table shows the number and distribution of books in the school libraries of my division:

Volumes in libraries of—	
Eighth grades	433
Seventh grades	140
Sixth grades	192
Fifth grades	268
Fourth grades	163
Third grades	80
Second grades	58
Total	1,334

There is now in the hands of the various teachers a fund of $54.48 with which to purchase new books to be added to these libraries.

The ways in which these books are obtained are various. In some schools pupils are asked to decide among themselves how much they are willing to contribute weekly or monthly; in others pupils are invited to contribute at will such small amounts as they are willing to spare from their candy or cigarette funds. The most lucrative scheme devised as yet seems to be that of having lunches in the play-rooms during the noon hour. Notice is given to pupils of all of the schools in a certain building that such a school will give a lunch in the play-room on a particular day between 12 and 1 o'clock. The articles sold are made or contributed by the pupils of the school for whose benefit the repast is served. These are pleasant occasions and are carefully supervised by the teachers.

Books are sometimes donated by the parents or friends of the pupils or by the pupils themselves.

PROSPECTIVE HIGH SCHOOL.

The new building to be erected on U street in this division will be beautifully located. Its comparative isolation makes it well adapted for the nucleus of a high school or a branch of the existing one. There are pupils in the High School now, graduates from the eighth grades here for the last three years, and fifty-four candidates for the coming year, all of whom have or will have to walk over two miles to school and two back, making four miles a day, with an armful of books, or pay two car fares, at a cost of nearly 50 cents per week.

The time required in going to and from the present High School each day, whether on foot or in the cars, is at least one and a half hours in all sorts of weather.

It seems that the establishment of such a school in this division next year would be wise.

MANUAL TRAINING.

This (to us) new branch, we never having had it until the past year, has received my special attention. It is now thoroughly inaugurated, and has, I think, come to stay.

Lessons of one and a half hours each, once a week, have been given to one hundred and one boys of the seventh and eighth grades in carpentry, to one hundred and forty-six girls of the same grades in cookery, and to all of the girls of the third, fourth, fifth and sixth grades in sewing.

In my opinion this is the grandest step forward that the public schools have ever made.

The accommodations for these schools are as yet unsatisfactory, in that they are located in basement rooms, which are to a certain extent damp and poorly lighted, and the rooms occupied by the carpentry classes are much too small. The completion of the new school buildings now under contemplation will furnish a remedy for this.

I have asked the teachers of the various grades from which the pupils are taken to receive instruction in these branches to give me their thoughts about this work, which will be found quoted below:

The desirability of the knowledge gained in the manual training schools is not questioned and the educational value of such training is being rapidly acknowledged. To our minds this knowledge will be of more practical use to the pupils than any gained by them from books in the same time, and will develop more their power to think and do than the same amount of time spent in purely intellectual work.

Further, we think our schools accomplish as much of the purely intellectual work as they did before the manual work was done. All of our boys go eagerly to the carpentry shop, while a very few of the girls object to the cooking, mostly because of home influence; but none are excused. (L. A. Bradley, school 1, grade 8; B. W. Murch, school 2, grade 8; H. B. Offley, school 3, grade 8.)

Pro.—It interests the pupils, because in the seventh grade it is new work. It relieves the monotony of the school work, by taking each pupil out of school one and a half hours each week to do work which is entirely different from the regular routine of school duties. It has a tendency to make pupils more skillful in handling school apparatus.

Con.—The hasty writing of recipes makes pupils more careless in other written

work, and when pupils come directly from these classes to the school-room there seems for a time to be a laxity of deportment and a disinclination to settle immediately to school work. (Maggie Turkenton, E. K. Gore, grade 7.)

I will say that my pupils lose nothing and gain much valuable and useful information from the lessons in these branches. (E. L. Godey, grade 7.)

The pupils in my school look forward with a great deal of pleasure to the time spent in the Manual Training School, and as everything that pleases them has a good effect upon their school work, it would naturally have the same on mine. There is an unjust distinction made between the carpentry and cooking classes on the one side and the sewing classes on the other, mainly the furnishing of all materials to the former and not to the latter. Many pupils in the sewing classes have nothing to work upon, and as some of them are very poor, there seems nothing else left for teachers to do but buy the materials and give to them. (M. E. McKenny, grade 6.)

I think the general effect of manual training upon the school is good, but among the boys there is a tendency to neglect the preparation of the lessons recited during their absence. Now that the novelty has worn off, many of the girls would neglect their sewing, and being held to their work is good discipline. (A. L. McArthur, grade 6.)

It is a good thing for the girls, and what they most decidedly need. There is a strange lack of interest, and even opposition, on the part of some of the parents, but I think this may wear off as they realize that the sewing is a part of the public-school work. It is less certain that it is equally good for the boys of this grade, who feel *shut out*.

Perhaps it is not strange that they rather resent having ordinary lessons while the girls are doing something "extra." (M. P. Keene, grade 5.)

I would say that I consider the sewing lessons beneficial, because, while giving a much-needed instruction, they, at the same time, furnish a pleasant recreation for the girls and do not interfere with the amount of work accomplished in our regular lessons.

I think, however, that it would be to the interest of the schools if the boys could have some corresponding work at the same hour, as they seem to resent the idea of being compelled to do the ordinary school work while the girls are otherwise, as they think, more pleasantly occupied. (E. A. Norton, grade 5.)

I think sewing has a beneficial effect on my girls, as it is a branch of industry in which every girl should be proficient. The time spent by the girls in sewing I generally devote to instructing my boys in some branch in which they are backward, and in that way I think they are rather benefited than otherwise. (E. J. Young, grade 5.)

BUILDINGS.

All of the buildings are in good condition except the rented ones, all of which we shall be able to dispense with before the beginning of the next school year.

The repairs are well attended to; indeed, I have never before known the buildings in better condition than they have been during the past year.

Finally I desire to tender to you, to Trustee J. T. Mitchell, and to the conscientious teachers, a grateful acknowledgment for great indulgence, kind assistance, and always cordial co-operation.

Very respectfully,

B. T. JANNEY,
Supervising Principal.

Mr. W. B. POWELL,
Superintendent of Public Schools.

SIXTH DIVISION.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: I have the honor to make the following report of the schools of the sixth division for the session of 1888–'89:

TABLE I.—*Showing the number of schools, the number and limit of grades in each school, and their distribution by buildings.*

Names or locations of buildings.	No. of school.	No. of grades in each school.	Limit of grade.
Conduit road	1	6	1–6
Chain Bridge road	2	5	1–5
Tennallytown	3	3	6–8
Do	4	3	3–5
Do	5	2	1 and 2
Grant road	6	3	2–4
Do	7	1	1
Military road, Brightwood	8	4	5–8
Do	9	4	1–4
Rock Creek Ford road	10	5	1–5
Mount Pleasant	11	2	7 and 8
Do	12	2	5 and 6
Do	13	2	3 and 4
Do	14	2	1 and 2
Columbia road	15	3	2–4
Do	16	2	1 and 2
Colored Orphans' Home	17	4	1–4
Mott	18	3	6–8
Do	19	1	5
Do	20	1	4
Do	21	1	3
Do	22	1	3
Do	23	1	2
Do	24	1	2
Do	25	1	1
Prescott	26	4	3–6
Do	27	2	1 and 2
Soldiers' Home	28	4	5–8
Do	29	2	3 and 4
Do	30	2	1 and 2
Fort Slocum	31	3	1–3
Bunker Hill road	32	6	1–6
Queen's Chapel road	33	3	1–3
Hamilton	34	5	4–8
Do	35	3	1–3
Benning	36	3	5–7
Do	37	4	1–4
Anacostia road	38	2	3 and 4
Benning road	39	4	5–8
Do	40	2	1 and 2
Burrville	41	4	1–4
Anacostia	42	2	7 and 8
Do	43	1	6
Do	44	1	5
Do	45	1	4

TABLE I.—*Showing the number of schools, number and limit of grades, etc.*—Continued.

Names or locations of buildings.	No. of school.	No. of grades in each school.	Limit of grade.
Anacostia	46	1	3
Do	47	1	2
Do	48	1	1
Hillsdale	49	3	6–8
Do	50	1	5
Do	51	1	4
Do	52	1	3
Do	53	1	3
Do	54	1	2
Do	55	1	1
Giesboro	56	4	4–7
Do	57	3	1–3
Hamilton road	58	2	6–8
Do	59	2	4 and 5
Do	60	2	2 and 3
Do	61	1	1
Good Hope	62	5	1–5

From the foregoing table it will be seen that there are 21 single-grade schools; about one-third of the whole number of schools in the county. Last year there were only 16. Every year we are enabled to effect a better grading in consequence of the rapidly increasing population in the entire rural portion of the District.

There was an increase of 3 schools during the year, 1 at the Mott, 1 at the Soldiers' Home, and 1 on the Benning road.

There are 25 classes of the first grade, 26 of the second, 27 of the third, 23 of the fourth, 19 of the fifth, 16 of the sixth, 12 of the seventh, and 10 of the eighth; making a total of 158 classes in the 62 schools.

HALF-DAY SCHOOLS.

We have been compelled to continue the objectionable half-day schools. There was an increase of 3 in the number of such schools, making the number at this time 20.

In mixed-grade schools the first and second-grade pupils have been sent home at 12 m., thus giving more time to devote to the higher grades in the afternoon. This method seems, from experience, to be the best that can be adopted in such schools.

SCHOOL BUILDINGS AND ACCOMMODATIONS.

The District owns 22 occupied school buildings, having a total of 56 rooms.

The only buildings rented are the Prescott of 2 rooms, and the Good Hope of 1 room.

Since my report of June 30, 1888, a lot has been purchased at Burrville, and a substantial 1-room frame building erected thereon. This building was furnished with the best new furniture, and occupied about February 1.

A lot has also been purchased at Brightwood and a very neat, 4-room brick building erected thereon, fronting on Brightwood avenue, near Emory Chapel. This building is now receiving the finishing touches. Three rooms will be occupied at the opening of the schools in September next, all of which will be furnished with new furniture similar to that at Burrville. These two buildings will accommodate those sections of the District for several years to come.

I wish to emphasize my recommendation of last year relative to the necessity of additional rooms on the Columbia road, at the Soldiers' Home, and at Anacostia. Bunker Hill road school will soon need additional room also.

THE COLORED ORPHANS' HOME SCHOOL.

The Colored Orphans' Home, established by act of Congress approved February 14, 1863, is under the direction of a board of managers, and is maintained by appropriations from Congress and by individual donations.

REPAIRS.

Some change should be made in the time of making repairs to school property. If all necessary repairs to buildings, stoves, blackboards, etc., could begin immediately after the close of the schools in June, and be completed before work is resumed in the fall, much annoyance would be avoided.

SANITARY CONDITION OF BUILDINGS.

With very few exceptions the sanitary condition of the school buildings and out-houses is as good as can be obtained with the facilities at hand. There are 14 old frame, 2 new frame, 1 old brick, and 5 new brick buildings. The old buildings need painting badly.

All of these buildings are heated by means of stoves, about 95 in all, generally two in a room.

It took about 275 tons of coal and 50 cords of wood to heat these buildings during the past year.

VENTILATION.

The means of ventilation are still unsatisfactory, being in many cases only windows and doors.

ENROLLMENT AND ATTENDANCE.

TABLE II.—*Giving statistics taken from the annual reports of teachers.*

	White.	Colored.	Total.
Whole enrollment	1,621	1,834	3,455
Average enrollment	1,224	1,381	2,605
Average attendance	1,088	1,256	2,344
Percentage of attendance	88	90	.....
Cases of tardiness	2,058	1,172	3,230

There has been an increase in the whole enrollment of 180 pupils (white, 102, colored, 78), and a corresponding increase in the average attendance, whereas the percentage of attendance remains about the same as last year.

The average enrollment per teacher, based on the whole enrollment, was 55; based on the average enrollment, was 41; and on the average attendance, 37.

There has been a slight increase in the percentage of attendance in the white schools, none in the colored. The number of cases of tardiness is 516 less than last year. While the attendance may be regarded as good for the county, it could be made much better if more tact were displayed in the treatment of irregular and troublesome pupils.

The school should be made so attractive that the child will go to it with delight and leave it with reluctance when dismissed for home.

Teachers, especially in the county, should make it a point to become acquainted with the parents of their scholars, and should visit them occasionally that they may have an opportunity of observing the home-surroundings and influence of their pupils.

TABLE III.—*Showing the whole number of pupils enrolled, by sex and color.*

	Male.	Female.	Total.
White	829	792	1,621
Colored	838	996	1,834
Grand total	1,667	1,788	3,455

Twenty-five pupils have been recommended for the High School, 17 white and 8 colored.

TABLE IV.—*Showing the whole enrollment, average enrollment, average attendance, and percentage of attendance of pupils, and days' absence of teachers, for each month in the year.*

Month.	Whole enrollment.			Average enrollment.			Average attendance.			Percentage of attendance.		No. of days of substitute service.		
	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	White.	Colored.	Total.
September	1,398	1,484	2,882	1,319	1,355	2,674	1,267	1,316	2,583	96.0	96.8	...	17	17
October	1,490	1,580	3,070	1,409	1,518	2,927	1,298	1,419	2,717	92.0	93.4	6½	8½	15
November	1,468	1,618	3,086	1,378	1,518	2,896	1,220	1,387	2,607	88.5	91.4	6	15	21
December	1,421	1,567	2,988	1,335	1,454	2,789	1,195	1,294	2,498	88.7	89.0	11	20	31
January	1,426	1,586	3,012	1,322	1,382	2,704	1,182	1,268	2,450	89.1	91.6	3	5	8
February	1,376	1,512	2,888	1,277	1,393	2,670	1,122	1,266	2,388	87.3	90.5	5½	7	12½
March	1,369	1,434	2,803	1,240	1,318	2,558	1,055	1,186	2,241	85.3	89.8	19	13	32
April	1,381	1,411	2,792	1,262	1,295	2,557	1,064	1,136	2,200	84.4	87.6	10	8½	18½
May	1,320	1,342	2,662	1,208	1,246	2,454	1,023	1,102	2,125	81.4	88.3	13	6	19
June	1,226	1,266	2,492	1,147	1,218	2,365	973	1,109	2,082	88.1	90.9	1	3	4
Total												75	103	178

The largest aggregate monthly enrollment of the white and colored schools combined was in November, 3,086. The largest average monthly enrollment was in October, 2,927. The largest average monthly attendance was in October, 2,717.

It will be observed in the above table that the percentage of attendance of the colored schools for each month is greater than that of the white schools for the same month. This has never failed to be the case in a single instance since my supervision of the schools began in September, 1876. I am unable to give the cause of this difference.

The number of cases of absence of teachers given in the above table, as indicated by the number of days of substitute service, is due mainly to sickness.

There has been more sickness among the children than usual, owing to the presence of scarlet fever and other febrile diseases, materially interfering with the attendance, etc.

I am sorry to have to note the death of several pupils during the session.

NON-RESIDENT PUPILS.

About 3 per cent. of the whole enrollment of pupils were from Maryland, near the District line.

These were children, who, having no other school privileges accessible, if not allowed to attend the District schools, would be deprived of school altogether.

Preference in these cases is given, first, to children whose parents own property in the District, and second, to those living nearest the District line.

By pursuing this policy no inconvenience to our schools is involved and little or no additional expense.

DISCIPLINE, INSTRUCTION AND SCHOLARSHIP.

TABLE V.—*Showing the standing of the schools as determined by observation and examination.*

	Excellent.	Good.	Fair.	Poor.
Discipline	45	12	3	2
Instruction	48	13	.....	1
Scholarship	34	23	4	1

Total number of schools, 62.

About 50 schools have shown a decided gain in all three of the essentials named above, whereas 9 have made only slight improvement, and 3 no perceptible progress.

It may not be out of place here to suggest that some action be taken by yourself or the trustees to devise a better method of ascertaining the standing of the schools for the future than the one now used.

DISCIPLINE.

TABLE VI.—*Showing the number of cases of corporal punishment and dismissal.*

	White	Colored	Total
Number of cases of corporal punishment	8	39	47
Number of dismissals	4	4	8

There has been an increase in the total number of cases of corporal punishment, but a decrease in the number of dismissals. The corporal punishment has generally been inflicted by young and inexperienced teachers, who resort to the rod for lack of better governing power.

TEACHERS AND THE QUALITY OF INSTRUCTION.

The number of teachers is 63, 20 male and 43 female; 30 of whom are white and 33 colored. Twenty of these (normal graduates) and a large majority of the rest are generally well qualified for their work.

The instruction given has been, in most cases, of the best quality. The teachers generally have been devoted to their work, having availed themselves of every means presented for self-improvement and for the advancement of their schools. I wish I could include *all* teachers in the latter class.

The very interesting course of university lectures on American history, delivered before the teachers of the public schools of the District, was well attended by the teachers of the sixth division. I have no doubt that the result will be beneficial to the schools.

Several hundred children of the county contested for the prize offered by the "Washington Post's Amateur Authors' Association," at the end of the year, for the best composition upon designated subjects, but the

offer not being generally or fully understood, the contest was not as spirited as could be desired; but we think it will be the means, if continued, of inciting the children to *honorable emulation*, and of elevating the standard of English composition in our schools.

There are a few teachers who have been more interested in other enterprises than in the success of their schools; such should seek at once employment in fields of labor more congenial to their tastes and better suited to their abilities.

Five additional first-grade teachers will be needed next session; one at Tennallytown, one at Brightwood, one at the Mott, one at Benning, and one at Anacostia. The schools on the Columbia road also will soon need an additional teacher.

Since my last report death has invaded our corps of teachers and removed from our midst Mr. R. L. Peters, principal of the Hillsdale schools. Mr. Peters had taught in the schools under my supervision just nine years from the date of his appointment to that of his death. Wherever he taught he was successful in building up a large school. His pupils loved him and his school patrons had confidence in him, hence he succeeded in his work. He will be gratefully remembered.

SPECIAL TEACHERS.

The assistant teachers of drawing, Misses North and AtLee, have visited about thirty of our schools during the session and have given intelligent instruction to the children and valuable suggestions to the teachers.

Mrs. Fuller has made her usual annual visit to the county schools, and inspected the work in drawing. The directors of music have given instruction to a larger number of schools this year than usual in this division.

The result of their labors has been unusually satisfactory.

NIGHT SCHOOLS.

In addition to the night schools already established in the Mott and Hillsdale buildings, one was opened last fall in the Anacostia building with one teacher.

I think a night school at Benning would be well patronized.

CLOSING EXERCISES OF THE SCHOOLS.

The closing exercises of the schools on the 19th instant were of an unusually interesting character.

In compliance with a request of the school board, the teachers had on exhibition in their respective school-rooms, at the close of the schools, specimens of work done by their pupils during the session.

In addition to the usual exhibits presented on such occasions, about 20 schools had on exhibition for the first time very creditable specimens

of needle-work, etc., and one school gave evidence of some knowledge of carpentry.

I believe all of the teachers of the county complied strictly and heartily with the order of the board relative to closing the schools, and I am pleased to inform you that I have never before known so much general interest taken in our closing exercises.

LIBRARIES.

No addition, I believe, has been made to the total number of volumes in the libraries of this division, owing largely to the fact that so few of the teachers have any proper or safe place in which to keep books, etc. The teachers would be encouraged to devote more time to this subject if a neat and substantial book-case were furnished each school-room. This could be done at small expense and would be of great benefit to the schools. The book-cases now in the school buildings are generally too small to be of much service.

The whole number of volumes on hand in 25 buildings is about 1,200. A few teachers have money in hand to buy more books when proper places are secured for their safe-keeping. The following statement shows the number of books, magazines, etc., relating to biography and history, in the schools of the sixth division, to which the pupils have access for study:

Number of books owned by the schools	274
Number of books loaned by teachers and pupils	381
Total number of volumes owned and loaned	655
Number of pupils having access to books, etc., for historical work outside of school	126

STUDIES.

Reading.—The effect of better methods of developing thought and good vocal expression in reading has been manifest in all grades.

The old custom of word-calling is gradually yielding to an intelligent comprehension of the lesson or subject to be read. Pupils have not been confined to the prescribed text-books, but the supplementary readers and other current literature have been freely used.

In the lower grades some attention has been given to teaching words by sounds. This exercise, I fear, has been too much neglected. I have usually found the best enunciation among those pupils who have had careful drill in the elementary sounds.

Spelling.—Spelling has been taught principally in connection with written composition.

There has been a tendency on the part of a few teachers to lay aside the spelling-book entirely and depend upon the written work.

Those teachers who have combined the written with the formal lessons on this subject have succeeded best.

Such words are taught as are needed for immediate use, and such only as are found within the limits of the pupils' studies.

Arithmetic or number.—The method of developing the idea of number as suggested in the number manuals for the lower grades has been adopted with gratifying results.

The children have not been allowed to depend entirely upon their teachers for suggestions, but have been encouraged to make their own problems.

The result of the excellent training given in number in the lower grades, for several years past, is now observable in the higher grades, the subject of arithmetic being more easily mastered at each successive step. No part of arithmetic is better understood than percentage. A few years ago this subject was carelessly passed over, and consequently imperfectly understood.

In arithmetic as in other subjects the old habit of depending upon the text-book has passed away. Teachers generally draw from their own resources or from other aids outside of the regular desk-books. The progress in arithmetic has been very gratifying.

Better results than usual have been obtained in algebra, owing to the fact, I think, that the eighth-grade pupils have not been so anxious to attend the city schools as formerly.

Grammar and language.—Improvement in language has been very satisfactory. About twenty graduates of the Washington and the Miner normal schools have had charge of the first and second grade schools in this division during the year, which will account largely for the unusual success in language and number work.

I believe the teachers have endeavored to follow your suggestions in regard to eliminating all unnecessary parts from the subject of grammar, and have taught their pupils to develop each topic in its logical order. Grammar, like other subjects, has been shorn of many of its dry and unpleasant features by the improved method of teaching it.

Geography.—The study of geography has been rendered unusually interesting to the children during the past year, owing to the attractive manner in which the subject has been presented, especially by the teachers of the graded schools.

In the mixed-grade schools "too much to do and want of time" has been made the excuse for neglect to develop this as well as other subjects as fully as could be desired, but the teachers of several such schools have done good work.

The usual supplementary readers on this subject have been freely and profitably used. The interest manifested in the study of this subject has amounted almost to enthusiasm.

History.—History is no longer regarded by teachers or pupils as "a compendium of isolated acts and events without cause or sequence;" but being immediately connected with geography, the subject has been taught and studied with reference to maps of the regions in which the

events occurred. Recitation from outlines developed by pupils has been a prominent feature in the study of this subject.

More collateral reading has been done during the past year than usual, but we still suffer from a lack of good books relating to biography and history, which we are trying to remedy as fast as possible.

The progress in history has been very satisfactory.

Physiology.—The teachers generally have given attention to this subject. Hygiene has been taught in all the grades. Interesting conversations on the human body have been conducted in the first and second grades and text-books recommended for the higher grades have been used for supplementary reading. As suggested by you, "language teaching" has gone hand in hand with physiology and hygiene.

Physics.—The teachers of the graded and partly graded schools have done some very good teaching on this subject, but in the ungraded schools nothing has been done, owing principally to the difficulties named in my last report—especially the lack of proper apparatus for illustration.

Penmanship.—The usual suggestions and recommendations relative to penmanship have been complied with.

We have looked more to the written work of pupils for an exhibition of good penmanship than to the usual copy-book exercises.

The schools have done very creditable work in this important branch of knowledge.

Music.—As already stated, the teachers of music for the first six divisions have visited and taught several more schools than usual in the county. In addition to their work, several schools whose teachers are not musicians, have employed private music teachers to give them instruction in this delightful science. Good *singing* is getting to be quite general in the sixth division. I trust that the directors of music will find it convenient to visit a few more of our schools next session.

Drawing.—I might with propriety pass over this subject without notice, as the regular drawing teachers who have visited many of our schools will doubtless be heard from, but I cannot refrain from writing a few lines.

At the closing exercises of the schools on the 19th instant, among other exhibits, there were fine specimens of clay moulding, stick-laying, paper-folding, modelling, free-hand and instrumental drawing, construction, and decoration.

The local exhibitions were ocular demonstrations of the fact that drawing is on the onward march in the county.

The work in drawing, moulding, stick-laying, paper-folding, and model-making has been pursued with more than usual interest and success. While no school of carpentry has yet been established in this division, about twenty boys from the seventh and eighth grades, with a laudable ambition to learn something of the use of tools, have regularly at-

tended such a school in the city, without any material interference with their other studies so far as I can ascertain.

We are anticipating, with much pleasure, the opening of manual training schools and cooking schools at the Mott, Benning, Benning Road, Anacostia, and Hillsdale buildings.

Sewing was introduced into such schools in the county last fall as are accessible by street railroads, and was faithfully taught by Mrs. M. W. Cate, who, by request, has submitted the following interesting report:

Whole number of pupils in sewing classes, 340. This number is made up of pupils from 14 schools, from the third to eighth grade, inclusive, divided for convenience into 10 sewing classes.

The pupils in the third and fourth grades have been taught "back-stitching," "over casting," "running seams," "gathering," and "top sewing," (or "over handing"), which embrace all of the features of what is commonly known as "plain sewing."

The pupils in the fifth, sixth, seventh, and eighth grades, in addition to the instruction above specified, have been taught hem-stitching, button-hole work, and patching.

The following statement will show the work accomplished during the year:

Sewing aprons, completed	325
Sewing bags, completed	325
Miscellaneous articles, including dresses, aprons, and underclothing, etc	473

In addition to the above, about 800 button-holes were made, and each pupil, from the fourth to eighth grade inclusive, completed at least two specimen patches.

The progress made by the various classes has been marked, and gives evidence, I think, of a genuine interest in the lessons. The hours of instruction are so arranged as to avoid tediousness, and the pupils, almost without exception, display a willingness to learn which is very gratifying and encouraging.

CONCLUSION.

I will state in conclusion that I fully realize the many difficulties under which the faithful teachers of the sixth division have labored, and I acknowledge with pleasure their sympathy and coöperation in my efforts to advance the interests of the schools.

To Dr. A. H. Witmer and Prof. J. M. Gregory, trustees of the sixth division, my special thanks are due for their prompt and willing assistance in all matters referred to them, and to you I wish to express my gratitude for your valuable suggestions in my work of supervision.

Very respectfully,

JOSEPH R. KEENE,
Supervising Principal.

Mr. W. B. POWELL,
Superintendent of Public Schools.

WASHINGTON HIGH SCHOOL.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: I have the honor to submit herewith a report of the High School for the year ending June 30, 1889.

Numbers and attendance.

Number of pupils re-admitted from previous year	600
Number admitted at beginning of the year	589
Number subsequently admitted	64
Number of withdrawals	219
Number at close of the year	1,034
Whole number enrolled (girls, 706; boys, 547)	1,253
Average number enrolled	1,106.96
Average number in daily attendance	1,059.72
Percentage of attendance	95.95

Year 1888–'89.

Months.	Average enrollment.	Average attendance.	Percentage.
September	1,161.2	1,151.6	99.1
October	1,112.3	1,048.1	97.2
November	1,178.7	1,144.4	97.0
December	1,147.8	1,098.8	95.7
January	1,132.5	1,088.5	96.1
February	1,125.8	1,075.5	95.5
March	1,168.4	1,042.2	94.0
April	1,066.3	1,006.7	94.4
May	1,016.0	962.1	94.6
June	1,020.6	979.3	95.9
			95.9

The number of pupils enrolled in each class has been: First-year class, 612; second-year class, 397; third-year class, 244.

Table showing growth of the school.

Years.	Number of teachers.	Average enrollment.
1882–'83	11	367
1883–'84	13	486
1884–'85	20	598
1885–'86	24	688
1886–'87	28	775
1887–'88	30	913
1888–'89	33	1,107

Statistics of attendance, 1888–'89.

Year opened with enrollment of	1,189
Maximum enrollment (October)	1,201
Close of year (June)	1,034
Average enrollment	1 107
Increase over previous year's average enrollment	194
Approximate ratio, boys to girls	3 to 4
Average percentage of attendance	95.9

Miscellaneous statistics.

Number of graduates:	
1882–'83	26
1883–'84	51
1884–'85	139
1885–'86	179
1886–'87	190
1887–'88	207
1888–'89	222
Number in the different courses in 1888–'89:	
Academic	508
Scientific	571
Business	149
Unclassified	25
Total	1,253

Average age in school:	
Between—	
12 and 13	1
13 and 14	25
14 and 15	95
15 and 16	272
16 and 17	340
17 and 18	315
18 and 19	168
19 and 20	31
20 and 21	5
21 and 22	1
Total	1,253

BUILDING AND ACCOMMODATIONS.

The half-day plan of school in the first year caused not only the disadvantage which such limited sessions entailed upon this class itself, but also a serious interruption to the smooth running of other classes. In arranging the schedule it was impossible to give half-day scholars instruction in music; their exercises in drawing and lectures in physiology and physical geography could not be crowded into the fifteen hours per week provided by the half-day session and consequently considerable overlapping of the morning and afternoon pupils was occasioned. This necessitated the entrance and exit of large bodies of students at irregular hours, some coming in at 10 a. m., others at 11; some leaving at 1 p. m., while the regular hours for dismissal were at 12, 2, and 3.

It was imperative that all members of the battalion should attend morning classes, and as it was impossible to arrange this for some, such students were unfortunately deprived of the privilege of military drill.

LACK OF ROOM FOR THE YEAR 1890–'91.

The addition to this school, now in course of erection, will contain 12 class rooms, ample laboratories, an armory and a library; it will be an admirable fulfillment of a long and serious need. The school for 1889–'90 will be organized with the accommodations afforded by this splendid improvement.

The difficulties of rented rooms and of the half-day session for a portion of the school will be removed, yet, at the moment that this will be accomplished, at the very time that the school will be rejoicing over

obstacles surmounted, it will be my duty to call attention to the indications for the future, as inferred from the statistics of the past.

The school has grown year by year at the rate of 20 per cent. approximately, *i. e.*, 1886, an increase of 90; 1887, 87; 1888, 138; 1889, 194.

With these figures as a basis it seems assured that for the year 1890–'91 there will be 1,600 pupils to be admitted to the High School.

The growth of the institution since the year 1886 has been far in advance of the accommodations afforded. With the erection of the addition it might appear that the future needs of the school, at least for a period of years, had been anticipated, but, as a fact, the present building and new wing are sufficient to accommodate no larger school than now exists. We believe this limit, from an educational point of view, a wise one; after passing 1,400, the students under one management will suffer materially in supervision, and the best interests of the school be seriously affected by the interruption of the legitimate work of a principal, from the consumption of valuable time in petty details, interfering with constant and searching supervision and the prompt remedy of evils in the quantity, quality, or manner of instruction.

It would be wiser, perhaps, to curtail rather than to increase the size of the school, provided that those pupils who are fitted, to whatever number they may desire it, are provided with advanced instruction.

The remedy for the evil of a crowded school exists either in the establishment of another high school, or in the creation of branch schools for the lower class, which, requiring but little apparatus, could be provided for without a costly plant.

It is inevitable that another high school should be built, but it is a matter that will require time for securing appropriations necessary for the building and apparatus needed. Legislation is slow and conservative; the project will meet many obstacles, but its ultimate success is certain. In the meantime the overflow from this school is to be provided for.

It seems feasible that girls of the entering class, to the number of four or five hundred, should receive instruction in all the studies of the present course in one or two branch schools, while all boys, the remaining girls of the same grade, and the upper classes should be taught here in continuation of the present plan.

It would then be possible to limit the present school to the proper number of students (at most 1,200) and go on with the higher work requiring laboratories and the extensive equipment which this school has been some years in securing.

This is regarded as a practicable *temporary* expedient only.

DISCIPLINE.

The discipline of the school has been good throughout the year, in spite of the difficulties of crowding and irregular hours of attendance. There have been but few disturbances beyond those prompted by mis-

chievousness and carelessness; the serious cases, resulting in suspension, numbered but three; while as a whole pupils have cheerfully and heartily given teachers their assistance in establishing the reign of good manners and orderly behavior.

Letters in reference to failure in studies or breaches of discipline have uniformly caused the co-operation of parents and the abolition of the evil, as a whole or in part.

There has been a constant and fairly successful effort made by the entire corps of teachers to establish self-control, deference to authority, obedience to superiors, and a noble ideal of manly and womanly character.

INSTRUCTION.

The school comprises an academic, a scientific, and a business department, the course of study in the first two occupying three years, and in the latter, two years.

The curriculum includes primarily "such studies as tend to make intelligent men and women and good citizens."

The academic department prepares for the academic work of college, with the exception of Greek, and young ladies for the work of teaching.

The scientific department prepares for the scientific work of college and the technical schools, and young ladies for the work of teaching.

The business department trains pupils for commercial and general business.

"The aim of the school is not so much to communicate knowledge, as, by wisely using it, to stimulate intellectual life and to train the mind to right methods of action.

"These results are sought, first, by a well considered plan of symmetrical study; second, by such modes of instruction as seem best suited to excite a thirst for knowledge, to quicken thought, and to furnish to the pupils practical examples of logical investigation and correct reasoning."

The departmental plan of instruction is pursued, most teachers having but one branch of study. A few have been engaged upon two or more allied subjects.

*Three courses of study outlined.**

Year.	Academic.	Scientific.	Business.
First...	English. History. Algebra. Latin. Physiology. Physical geography. } Lectures.	English. History. Algebra. German. Physiology. Physical geography. } Lectures.	English. History. Algebra. Book-keeping and business arithmetic. Physiology. Physical geography. } Lectures.
Second	*English* (first half year), *history* (second half year). Geometry. Latin. Physics.	English (first half year), history (second half year), or chemistry (whole year). Geometry. German. Physics.	English (first half year), history and political economy (second half year), or chemistry (whole year). Book-keeping and business arithmetic. Commercial law and commercial geography. Physics.
Third...	Trigonometry and surveying, or English. Latin. *German.* *Botany.* *Chemistry* and *mineralogy.* *History* and *political economy.* *Advanced physics.*	Trigonometry and surveying, or English. German. *Botany.* *Chemistry* and *mineralogy.* *History* and *political economy.* *Advanced physics.*	Certificates are given at the end of two years, but pupils desirous of continuing in school may take suitable studies of the third year in other courses, and receive diplomas of graduation.

(*a*) Elective studies are printed in italics; all others are prescribed.

(*b*) General exercises in composition, declamation and drawing are required in all the courses; a general exercise in music is optional.

(*c*) Military and calisthenic drills, under the same regulations as during the past year.

(*d*) Manual training for pupils of both sexes throughout each course is optional.

(*e*) Not more than four studies may be pursued at one time.

(*f*) Candidates for diplomas must pursue all the prescribed studies of the first and second years, and at least three studies in the third year; students who, for any cause, fail to meet this requirement are enrolled as "unclassified," and can not graduate until the prescribed work is satisfactorily made up.

A résumé of the work of the year in the various branches will be of interest.

BATTALION.

The progress of last year's battalion surpassed that of former years. This was in a measure owing to lengthening the drill period. When the boys gave their first parade on March 7 they never marched to better effect.

The following is an extract from a recent letter to Captain Ross:

It affords me pleasure to state to you that such cadets from the Washington High School as have appeared before me for examination in tactics have passed with ease, showing as much knowledge of the subject as those coming from the Military Academy of Pennsylvania or that of Michigan. Three captains, several lieutenants, and two or three first sergeants of my battalion have been under your instruction.

Respectfully,

W. P. VAN NESS, U. S. A.,
Com. at Cornell University.

* For the coming year (1889-'90) English is made a prescribed study throughout the course, and an option between physics and chemistry is given in the second year; while the electives of the third year have been grouped as follows: Trigonometry and surveying, or history. German. Botany, or chemistry and mineralogy, or advanced physics. Political economy.

The competitive drill was the most successful the battalion has ever known. When the companies had finished no one there was free to state to which company would go the honors. We quote Captain Chase, the chairman of the judges:

The High School has good reason to feel proud of its battalion. The drilling was second to none I have ever witnessed, and I regret that any distinction has to be made, but as such is the case it is decided that Company D has won the prize.

With the battalion drill in front of the Arlington the year's record closes.

The "Star" said previous to the drill:

The corps has shown unusual proficiency this year under the direction of Captain Ross, so that the accustomed fine exhibition of soldierly conduct and drilling may be expected.

The "Post" said the following day:

The evolutions of this fine body of young men showed a high degree of skill and careful training, the soldierly appearance and carriage winning much admiration. The culmination of each military maneuver was greeted with loud applause and waving of handkerchiefs. Commissioner Douglass and a number of distinguished citizens reviewed the drill from the hotel balcony.

The High School can well be proud of the battalion of 1888 and 1889.

The opinion of Adjutant-General Kelton is quoted with pleasure:

In my opinion the High School cadets are the best drilled body of boys in the country.

The general takes a great interest in national guard matters here, and elsewhere, and may be regarded as an authority.

Too high praise can not be given Captain Ross for his training of the battalion. The sharpness of his discipline and the efficiency of his instruction insure a fine set of officers and men at the end of each year.

BUSINESS TRAINING.

Number of pupils: First year, 108; second year, 42; total 150.

The aim of the course is to impart to the students a thorough and practical knowledge of book-keeping and business arithmetic, to familiarize them with the fundamental principles of commercial law and civil government, and to acquaint them with the leading facts of commercial geography.

The first-year pupils were taught arithmetic, single entry and double entry book-keeping, and were trained in drawing the simpler forms of commercial paper.

In the second year the work in book-keeping and arithmetic was a continuation of the work of the first year, attention being chiefly given in book-keeping to advanced double entry. In commercial law the text-book was largely supplemented by practice in drawing business forms. In civil government and commercial geography the pupils were required to prepare and deliver lectures upon such subjects as state taxation, city government, the origin of the jury, and to prepare papers giving the statistics relating to the various manufacturing and agricult-

ural industries of our country, transportation, markets, etc., thus training them in the use of reference books, and in the collection and arrangement of facts. In addition to this, text-book and note-book work was required.

Throughout the course pupils received information concerning stock exchanges, banks, clearing-houses, and similar subjects.

During the following year it is intended to extend the course in book-keeping, so as to include bank and joint-stock company book-keeping, and to require students to conduct a bank in connection with their work in the manner pursued in the best business colleges.

CHEMISTRY.

Number of second-year pupils, 103; third-year pupils, 34.

The work of the chemical department is entirely optional. The study of general chemistry is pursued through three-quarters of the second year. Practical work in the laboratory is made a prominent feature from the very beginning, all pupils being required to prepare oxygen, hydrogen, etc, for themselves, in order to learn the properties of the various elements from personal observation and manipulation, for which the demonstrations of the instructor can never furnish a satisfactory substitute. In the fourth quarter, when qualitative analysis is begun, pupils are not allowed to use any "cut and dried" system of analysis, but are required to make all the principal tests for metals and acids, and then, by comparison and a careful tabulation of the results of their own work, each is led gradually to evolve methods for the determination and separation of all the metals and acids. Though this method of procedure throws a greater burden upon the instructor its advantages are apparent. While this course is pursued it is impossible for a pupil to go through the various steps in the process of an analysis mechanically or without understanding "the why and the wherefore," as almost certain to be the case in the use of tables for analysis already constructed for them. During the third year the course in qualitative analysis is completed. In the coming year for the first time quantitative analysis will be undertaken, and it is hoped to extend this work considerably with the greatly improved facilities which will be at command in the new laboratory.

The work of the class-room and laboratory has been supplemented by weekly lectures to each class. In the second year the lectures were chiefly devoted to an elucidation of the general principles of the science of chemistry and performing experiments, which, from the difficulty of manipulation or the expense of materials involved, could not be satisfactorily performed by individual pupils in the laboratory. The lectures to the third-year class related chiefly to the great chemical industries and to the practical application of chemistry in the arts, including such topics as disinfectants, bleaching, dye-stuffs, pigments, etc. The lecture course to the advanced class was varied somewhat by the intro-

duction, from time to time, of papers prepared by the pupils themselves on subjects of a similar nature, such as explosives, natural gas, inks, matches, pyrotechnics, urinary analysis, poisons, etc. The study of mineralogy occupied the last quarter of the third-year course. An important feature of this work has been the weekly visit of the class to the National Museum for the study of the unrivaled collections there displayed. The aim throughout the course has been to make the work pre-eminently practical; analyses have been made of ores and alloys in common use, mineral-waters, washing-blues, baking-powders, etc. Adulterants were detected in more than half of the last mentioned that were examined.

The aim of the work in the chemicaldepartment has been not the acquirement of a certain number of facts, but rather the attainment of habits of accurate observation and correct inference, which are deemed of more value than all the knowledge to be obtained from books or lectures. Therefore the work consists chiefly of experiments to be performed in the laboratory, where each pupil is required to solve his own problems by the best scientific methods.

COOKING.

During the year about two hundred pupils from the first and second year classes, who had not taken cooking the year before, received instruction.

Each class had one lesson of two hours each week.

The course was similar to that of last year, but instead of dictating facts and recipes, the pupils were allowed to ascertain these facts for themselves by means of experiments. They also wrote their own directions for making an article, having first made it under the direction of the teacher.

A class of ten pupils received instruction in the preparation of more difficult dishes than those given the first year, and in selecting, dressing, and roasting poultry.

DRAWING.

Number of pupils in special classes, 240: First year, 80; second year, 82; third year, 78; in the regular classes, all others (total 1,200). The work in this department is so little understood, that it is desirable to report at length upon the course of study and the success of the teaching.

Regular classes.

FIRST YEAR: One hour per week.

Geometrical work.—Problems for drawing polygons and geometrical design.

Free-hand work.—Review and study of cylinder, cube square prism, and objects based on them, as goblets, chairs, etc., study of triangular prism, hexagonal prism, and square, pyramid, groups of models; door or window; gothic ornament, from copy; flowers and leaves from nature, and design.

SECOND YEAR: One hour per week.

Geometrical work.—Projections or making working-drawings of lines, planes, and solids, development of solids and making model of paper.

Free-hand work.—Study of hexagonal prism and of school-room objects, as waste-baskets, flower-pots, books, etc., in different positions.

THIRD YEAR: One hour per week.

Geometrical work.—Projections or making working-drawings of lines, planes, and solids in various positions; development of solids and making the models of paper; perspective.

Free-hand work.—Short review in drawing from objects.

The course was advanced last year by the second and third year classes having the same work in projections, which will leave more time for the present third-year class to spend in drawing from objects.

Special classes.

FIRST YEAR: Two hours per week.

Geometrical work.—Study of polygons, ellipse, parabola, hyperbola, cycloid curves, Roman and Greek moldings, etc.

Free-hand work.—Study in outline of single models, groups of models, and Greek vase forms; study of plant drawing from nature, and patterns designed from some plant drawn.

Work in clay.—Modeling in relief from casts of leaves, and from the natural leaf.

SECOND YEAR: Two hours per week.

Geometrical work.—Projections, orthographic and isometric; perspective, by direct use of projections and by use of vanishing points and measuring points.

Free-hand work.—Study of light and shade, shading with stump, single objects, groups of objects, Greek vase forms and simple casts.

Work in clay.—Designing a simple rosette form and modeling it in relief.

THIRD YEAR: Two hours per week. Three courses, elective.

Geometrical work.—Continue work of previous year in projections, with light and shade, using water-color washes.

Study helix and screws (wooden and iron).

Study development of solids, making paper model—cones showing parabola, hyperbola, ellipse; roofs with dormer windows; one prism penetrated by another, etc.

Crayon work.—Continue work of second year, using more elaborate casts—of fruit and flowers, of the parts of the human face; masks of classic heads, and busts.

Water-color work.—Study of typical examples of decorative styles, in color; painting flowers from copy and from nature; original design, both pattern and color.

A competitive examination was held at the opening of the term for appointments to the first-year special class. Over 100 pupils took the examination.

ENGLISH.

Number of pupils, first year, 639; second year, 195; third year, 107; total, 941.

The English of this school is in a transitional state; changes are being made slowly.

We believe that a systematic study of the art of composition and the careful critical study of the masterpieces of English prose and verse are

wholesome and practical. Such changes have been made in the course for the coming school year that by the next report gratifying results are confidently expected.

The effort in the past year has been in two principal directions: The cultivation of the pupil's command of language, and the study of English and American literature in such a manner that the pupil acquired, in addition to a knowledge of the history of literature, an appreciation and love for the works of the best writers.

The first year work included instruction in composition, embracing principally structure and style, and, secondly, the study of the general development of English literature. For the historical study, a complete outlined synopsis prepared by the head English teacher, Mr. G. J. Smith, was furnished the pupils as a basis; but the main part of the work in literature was the study of nine literary masterpieces selected from the works of as many great representative authors. In the class work attention was given to the period of literature represented by the author under consideration, and to the various works of the author, but the special study of the work selected was directed toward implanting an appreciation of good literature. In this effort the school library proved exceedingly useful.

The second year work covered but half the year. The first quarter was given to a systematic study of rhetoric; the second, to Shakesperean comedy, one play being selected for special study. In the second as in the first year work frequent written exercises were required in which the pupils were taught to apply constantly the various principles of skillful composition.

The third year consisted of the study, for half the year, of formal logic; which was followed by fairly exhaustive work in Shakespearean tragedy, especially the plays of Hamlet and Macbeth.

The head teacher of the English department has in preparation complete syllabi of English and American literature, and other aids to the English studies in the school.

Schedule of English work, 1888–'89.

Quarters.	First year.	Second year.	Third year.
First	Chittenden's Elements of Composition. Simpler principles of rhetoric applied in abundant written work.	Text-book, A. S. Hill's Principles of Rhetoric. The subject rather than the book studied. Continual practice in writing.	Text-book, Jevons's Logic. In deductive logic were discussed terms, propositions, and syllogisms, their various kinds, relations, etc. Printed lists of arguments for criticism furnished the class. Study of inductive logic followed.
Second	Reading of masterpieces of English literature, with work on the contemporary literature. Inexpensive editions from various sources used in class work. (*a*) *Tennyson.* Elaine. (*b*) *Dickens.* Tale of Two Cities. (*c*) *Macaulay.* Essay on Warren Hastings. (*d*) *Coleridge.* Ancient Mariner.	Study of Shakespearean comedy. Play selected for special study, class-reading, criticism, etc., "As You Like It;" written composition work required in this connection.	
Third	(*e*) *Goldsmith.* She Stoops to Conquer. (*f*) *Addison and Steele.* Sir Roger de Coverly papers. (*g*) *Milton.* L'Allegro and Il Penseroso.	[In the second half year another set of pupils took the same work as above, except that the special play was "Twelfth Night."]	"Hamlet," with a thorough study of Shakespearean tragedy and of the Elizabethan literature and times, followed in the fourth quarter by "Macbeth."
Fourth	American literature; history, chief names and works, brief readings from Irving and others. Written work all the year.	All second and third year pupils during the year had weekly exercises in practical English composition. This work was taken on Friday afternoons.	

GERMAN.

Number of pupils: First year, 253; second year, 169; third year, 168.

As in former years this department continues to be one of the most popular in the school. The "natural method" is employed in teaching, but the use of the English language is not entirely banished, translations from German into English and *vice versa* being made whenever necessary. As a rule, however, German is spoken in the class-room from the beginning, and grammatical studies are also systematically carried on in the language proper. Beside this, reading, writing, and speaking German, as well as original composition, especially letter-writing, are practiced. Dr. Bernhardt's "Series of Text-Books for the Study of German," viz:

Vols. I, II of "Deutsches Sprach- und Lesebuch" (German Grammar and Reader).

Vols. I, II of "Im Zwielicht" (First and Intermediate Readings in German Prose.)

Vols. I, II of "Deutsche Novelletten-Bibliothek" (Advanced Readings in German Prose).

have been used with marked success.

The scientific classes take a three years' course, studying in the first year (five hours weekly) volume I of Deutsches Sprach und Lesebuch.

This course familiarizes pupils with descriptive German. In the second year (four hours weekly) the study of volume II of the same book (narrative style of the language) and reading original German texts ("Im Zwielicht"), in connection with which systematically arranged oral and written translations are carried on. Third year course (four hours weekly), embraces a general review of the whole grammar, translations from English into German, and reading of more advanced German texts ("Novelletten-Bibliothek" and "Scientific German") in the boys' classes, while the girls take up the reading of some of the masterpieces of German literature, viz., Schiller's "Wilhelm Tell" and Goethe's "Hermann und Dorothea."

The academic classes (five hours weekly), with only one year's course in German, go over the whole ground of the first and second years' scientific sections, which is sufficient for entrance to college.

HISTORY.

Third year.—Last year's class in general history followed about the same line of work as the class of the preceding year.

The text-book, Freeman's General Sketch, was used as the framework upon which to build up as extended a knowledge of the subject as the time would allow, by showing the connection between different epochs which were treated as such, in order to obtain a more complete knowledge of their character and importance.

The growth of civilization, and especially the institutions which have been so characteristic in that development was studied. It was not sufficient to know that such an event or institution succeeded some other, but constantly the reason why such was the case, and how each was the natural outcome of certain causes which had been in operation, was sought.

At the beginning of the second quarter a course of lectures was delivered upon the introduction and development of Christianity.

The work of the year concluded with the reading in class of Robert Mackenzie's "Nineteenth Century," in order that the pupils might get a full, connected, and interesting account of the events of our own time, and thus be the better prepared to understand the state of affairs now in progress.

The course of lectures instituted by Superintendent Powell for the teachers, on topics connected with the early history of our own country, had a very beneficial effect upon the work of this class. A number of the pupils attended the lectures regularly, and seeing the interest manifested, the study of some important questions in American politics since the establishment of our Government was suggested. The idea was readily adopted by quite a number of the class, who voluntarily read up subjects suggested, and wrote essays which were read and discussed in class during the closing hours of the session. Some of the topics treated were: Washington's First Administration, The Alien and Sedition Acts, Aaron Burr's Conspiracy, The Causes of the War of 1812,

The Monroe Doctrine, The Missouri Compromise, The Anti-Slavery Agitation, etc.

In furtherance of the belief that all of our efforts in teaching should tend to the development of a deeper spirit of patriotism in the pupils of our schools, it is earnestly desired that the small collection of works on American history now in our school library should as soon as possible be very largely increased.

GREEK AND ROMAN HISTORY.

First year.—The first-year history classes began their course with the study of the geography of ancient Greece and the neighboring regions.

The probable development of men in the prehistoric age and the division into races, with the causes of the same, down to the settlement of the Greeks in their own land, were presented.

The mythology of the Greeks was then taken up, to the extent of learning the characteristics of the leading divinities and the deeds of the principal heroes, paying especial attention to the poems of Homer, as the starting point of what is particularly Greek, in the history of the social and political features of that people.

At that point Fyffe's Primer of Greek History was taken up, and each lesson was supplemented with matter procured from other sources. All through the work the desire was to have the classes see the development of the Greeks, in their political, social, and intellectual life, and to impress these characteristics upon the minds of the pupils by drawing parallels or contrasts to like features in our own civilization.

Roman history was begun in the third quarter, and developed in the same way in which the history of Greece had been treated. The distinctive characteristics of the Romans were brought out, as well as the influences of other peoples, notably the Greeks, upon the Romans. The work in Roman history continued to the end of the year, when the time of the invasion of the barbarians and their settlement within the Empire was reached. The text-book used was Creighton's Primer of Rome, supplemented by constant reference to other authorities.

LATIN.

Number of pupils, first year, 228; second year, 157; third year, 96; total, 481.

The course covered about seventy chapters of Leighton's Latin Lessons and the second book of Cæsar for the first year; the first, third, and fourth books of Cæsar, and three Orations of Cicero for the second year; and five books of the Æneid, one Oration of Cicero, and twenty lessons of Jones's Latin Composition for the third year.

Throughout the course, drill in the grammatical principles of the language and translation of English into Latin are insisted upon, with some translation at sight and at hearing.

The work done in this department is regarded as mainly of a prepar-

atory character, and as aiming chiefly at mental drill. Yet some effort is made to pursue the study of the language as a literature. Essays on points of history and the customs of the Romans and on the writers of different periods were handed in from time to time during the year. A parallel study of Homer, Dante, Milton, and other authors was kept up by some students of the third year. Others were reading, independently of any assistance or suggestion of the teachers, Latin outside of the course, as Cicero's Letters and Essays and Ovid's Metamorphoses.

The reference books available in the library were used with great interest.

Two lectures were delivered during the year before the pupils of the third-year class, one by Miss L. M. Dame, formerly assistant principal of the High School, the other by Prof. A. P. Montague, of Columbian University.

The adoption of Collar and Daniell's Latin Lessons is a progressive step, as the new book embodies the latest and best methods for teaching the introductory principles of the language.

MANUAL TRAINING.

Number of pupils, 247. First year, 150; second year, 73; third year, 54. Time, 2 hours a week.

The plan of manual training in the High School is to continue the course of joint-making, carpentry, and cabinet-making, started in the seventh and eighth grades of the grammar schools, by offering a course of wood-turning, pattern-making, and draughting in the first year; iron and steel forging, soft-metal molding, and draughting in the second year; chipping and filing, machine construction, and draughting in the third year.

It will be seen from the above plan that draughting forms a part of the training in each year. This function of manual training is indeed an important one, since the educational sequence is, first, the conception of the object followed by the planning and drawing, then, and not until then, the construction or materialization of the thought.

The necessity of having the drawing connected with the shop-work was recognized, although the facilities for its practice were almost entirely lacking, through want of suitable room and adequate means.

The second and third year pupils did little drawing in connection with the shop-work, while the first-year pupils finished a number of sheets, with some blue prints from the same. However, all work was done directly from drawings, blackboard sketches, or prints, made either by the instructor or in some cases by the pupils at their benches.

The course above mentioned was not followed exactly in the first and third years, since most of the pupils were inexperienced (as a result of the recent establishment of the course); consequently first-year pupils were given bench-work in wood, while the third-year pupils were given forging and wood-turning.

The success of this branch is manifest on all sides, and perhaps most of all in the earnestness and vigor with which it is pursued. The work in the shops has been limited by the small amount of time spent by each scholar to special work or tools which shall embrace as many methods of manipulation as possible, rather than the production of any one piece for show. Indeed the work has at times seemed to be, as Dr. Woodward says it should be, "valuable experience and chips." Notwithstanding, as those who were enough interested in the work to visit the school during the exhibit held at the close of the year can testify, the many fine pieces could hardly be designated as "chips."

The want of facilities has also limited the work. The cramped condition of this department, resulting from the overcrowding of all accommodations in the school, will be indirectly relieved by the additional room in the new wing of the main building. Growth of interest has been retarded many times by the (make-shift) methods made necessary by the lack of the adequate facilities and altogether insufficient appropriation for this branch.

MATHEMATICS.

Number of pupils, 1,103. First year, algebra, 615; second year, geometry, 401; third year, solid geometry and trigonometry, 87; surveying, 54.

Algebra.—An earnest effort has been made to develop this subject as "the science of the equation." With this view of the subject, operations and rules, commonly designated as "formal algebra," have been taught with direct reference to their application to equations. Processes have been made subordinate to principles; particular attention has been given to the reason for special methods, with the endeavor to keep final objects in view as well as the immediate.

Teachers have aimed to follow a rational method of instruction, letting the thing introduce the definition, and the operation lead up to the rule, theory and application going hand in hand, confining recitation to the clear presentation of a single truth or process emphasized with a variety of applications.

The practice of requiring each pupil to prepare and present to the class an original problem occasionally has proved beneficial in impressing accurate ideas of the conditions necessary in the solution of problems.

Geometry.—This study has been used mainly as a training for development of reasoning power. Mental vigor has been stimulated by the constant use of "originals"; frequently the demonstrations of the text have been set aside altogether, and students led to evolve for themselves the laws governing the subject, and to make the proper deductive application of such principles.

Surveying.—The classes in surveying, owing to the rapid growth of the school and the number of elective studies in the third year, were

somewhat large and difficult to handle. As the number of instruments in use is limited, it is with the utmost difficulty that boys perform the problems allotted them for out-door work, without interfering with recitations in the other subjects, and it is feared that either the number of boys allowed to take up this branch of mathematics must necessarily be limited, or the number of instruments increased. In spite of these drawbacks, good work in surveying has been done.

Sections of six boys each, under the care of a leader selected by the teacher from the best pupils of the class, have made surveys for area and plot in Soldiers' Home Park, Potomac Flats, and Monument Grounds; leveling for profile and contour in the vicinity of Howard University, a reconnoissance of Rock Creek and some of the roads at Soldiers' Home Park; the determination of heights and distances by means of triangulation, and plot of school yard by means of plane table.

The leaders of the sections have kept note books containing all the necessary data; and each member of the class hande d in five sheets containing the plotted problems.

The method pursued was similar to that of last year, and involved resurveys by each section of the work of the others.

MUSIC.

It is to be regretted this year, as last, that pupils of the first year have been deprived of instruction in singing by the half-day plan of school. It will be detrimental to the general musical proficiency of the classes when the return to fuller sessions makes music a possibility for all who desire.

Professor Butterfield, in his report of June, 1889, says:

I have been pleased with the work of the music class in the High School this year, although it is not what I would like it to be.

I feel that great injustice is or has been done the first-year pupils by not giving them their music hour, but I don't see how it could have been helped.

* * * * * * *

We really need a concert grand piano for the hall. The one we now have is entirely inadequate for a room of that size, and I earnestly hope we may be provided with one suitable for the uses it is put to.

NATURAL SCIENCE.

Instruction in botany by recitation and laboratory work is given in this department to third-year students. It is an elective study, extending through the year. Each student has one hour a week for laboratory work, in which the use of the microscope is learned; a series of histological studies in the microscopic examination of plant-cells and tissues follows. Each student is also given practice in the preparation and arrangement of herbarium specimens. Work in description of flowers and in study of the principles of botany from objects, from Gray's lessons and from lectures, occupies four hours a week for each student. The course is adapted to the seasons, by use of flowers as material in

fall and spring, and other parts of plants, as the study of roots, stems, buds, etc., cryptogams and lectures, in the winter.

Instruction in other branches of natural science is given to the first-year class by one lecture a week for each student throughout the year. This course is planned to give a general view of the foundation principles of the sciences. The subjects considered are human and comparative physiology and animal structure, physical geography as applied to the earth's surface, water, atmosphere and climate, geological agencies and history, classes of rocks, remains and distribution of past and present life on the globe.

Besides work done in formal instruction, it is the aim of this department in particular to stimulate interest in nature among all students. Believing that this is best accomplished by making students collectors and showing them how to put collections into permanent and scientific form, a series of such collections have been started and much interest among students aroused, with large contributions of material and work. The following is an outline of the natural science collections in the Washington High School:

I.—*Botanical collections, begun in 1883, and arranged in glass cases in the botanical laboratory.*

(1) Herbarium of the flora of the District of Columbia, prepared by students under guidance of the instructor, Mr. E. S. Burgess. The plan of this herbarium is believed to be unique, as a full exhibit of the local flora in its range of growth and variation, showing not only each stage of growth or each series, but also each prominent form, the latter far exceeding the named varieties in number. This plan is adopted, not only to make the collection accord to scientific principles and to give it great value for reference, but to furnish students with examples of permanent and of variable characters and material for practice in classification, as well as to impress upon them standards of what constitutes a genus or species.

(2) Miscellaneous herbarium specimens, representing other flora than that of the District, including European and West Indian specimens, besides those native or cultivated in the United States.

(3) Wood-sections; large radial sections of about forty of the principal trees of the United States; also smaller cross-sections of branches, etc.

(4) Fossil-plants, specimens from the coal-flora of Pennsylvania, principally of ferns.

(5) Large leaves, as of palms, bamboos, banana, etc., including many tropical and unusual forms too large for ordinary mounting, preserved dry; about one hundred species, obtained from Washington conservatories.

(6) Key-collection for the determination of native trees, by the comparison of their leaves; to show the characteristic leaf of each tree native of the District, mounted on standard herbarium paper.

(7) Type-collection, to illustrate external plant structure; arranged in a series of dried specimens to accompany Gray's Structural Botany or Lessons, in boxes in a chest of drawers facing the main recitation-room.

(8) Reference-collection of dried parts of plants (stems, roots, branches, hairs, buds, flowers, fruits, seeds, etc.) in boxes in chest of drawers in smaller laboratory.

(9) Exhibition-collection of nuts, acorns, cones, dried fruit, and capsules; also some other parts of plants; in glass case in main laboratory, arranged in boxes; with sets of herbarium specimens for exhibition, on sheets.

(10) Collection of plant-portraits, including eighty colored plates of flowers, presented to the laboratory by the instructor, with sets of water colors, crayon and chalk colors, the work of students, illustrating both native and cultivated plants.

(11) Charts in black crayon and charcoal, exhibiting, first, important plants; second, structure of organs; third, microscopic structure; fourth, shape of leaves; fifth, samples of peculiar leaves and plants; sixth, types of algæ with chara, desmids, and diatoms; seventh, types of the ferns, mosses, lichens, fungi. All drawn by students.

(12) Systematic chart of vegetable kingdom on rollers, exhibiting leading characters and examples of important orders; also prepared in the laboratory.

(13) Historical chart, on rollers, giving dates of the greater botanists and their discoveries; indicating the successive steps in advancement made by botanical science.

(14) Drawings of the Columbian flora, natural size, with drawings of their minuter structure magnified 2 and 3 diameters; forming a series of uniform pencil sketches, a part of the class-work of students.

(15) Collections of cryptogams, including—

(*a*) Dried specimens, in boxes, of fern-allies, mosses, lichens, and fungi.

(*b*) Specimens of marine and fresh-water algæ, in fluid.

(*c*) Specimens, chiefly of mosses and algæ, mounted on paper.

(*d*) Set of mounted slides, of algæ and plant-structure.

(*e*) Collection of miscellaneous material for microscopic work.

(16) Collection of growing plants, the gift of students, for which a small room is provided connected with the main and smaller laboratories.

Besides the foregoing, certain special facilities should be mentioned, as boxes for dissecting and drawing apparatus, a few portraits of scientific men, six compound microscopes, and a series of scientific books and periodicals, forming, with those loaned by the instructor, a large reference collection for students' use. New and commodious botanical laboratories have been fitted during the past year in the southwest corner, on the third floor, including three rooms, as follows: First, the main laboratory, provided with tables for fifty students, book-shelves, six glass cases and one chest for collections; second, the smaller laboratory or microscope room, seating twelve at tables, for work with the microscope, communicating with the main room by folding doors, and thrown open to afford additional room during lectures, the two then seating one hundred and twenty; third, the propagating room, fitted with shelving for plants, and communicating with both the others.

II.—*Collections toward forming a museum, chiefly by contributions and works of students, occupying an adjoining room between botanical and physical laboratories.*

During recent summer vacations as well as during the school session many students have been collecting with a view to making contributions to this. Among the collections already in whole or in part completed are the following:

(1) The butterflies and moths of the District, made in and before 1883, the work of three members of the class of 1884, chiefly by Titus Ulke, with assistance of Herman Birney and William Schoenborn. To these are added some specimens of Coleoptera and miscellaneous insects.

(2) Ants of the District (by Dr. Hugh M. Smith, of the class of 1884).

(3) Shells of the District (by the same).
(4) Birds of the District (including skins and mounted specimens).
(5) Specimens in alcohol of snakes, lizards, salamanders, batrachians, and fishes of the District.
(6) Spiders of the District (by favor of Dr. George Marx).

Continued additions to the foregoing are being made by students and friends of the school, and it is sought by this work not simply to form collections for reference and exhibition but to promote original research and interest in nature on the part of the students.

(7) Collection of marine invertebrates from Vineyard Sound, partly in alcohol, (distributed by the Smithsonian Institution).
(8) Collections illustrative of physiology and anatomy, including specimens in alcohol and charts in black and colored chalk prepared by students to illustrate general and microscopic structure, both human and comparative.
(9) Charts illustrative of zöology, similarly prepared.
(10) Collections illustrative of geology, including similar charts and mineral and rock specimens and ores.
(11) Miscellaneous objects, including arrow-heads, palcoliths from the Piney Branch quarries, lavas, mosaics and articles of historical interest.

PHYSICS.

Number of pupils, second year 375; third year, 25.

From lack of time and space, laboratory work was stopped entirely for the second-year classes, but pupils were encouraged to perform experiments at their homes.

In addition to the class-room instruction pupils were combined once a week and given a lecture, accompanied by elaborate experiments and demonstrations. The work in sections was illustrated constantly by physical apparatus.

An opportunity will be provided as soon as possible for actual individual experiment with abundant apparatus, in a well appointed laboratory. This will be a progression in teaching the subject, simplifying the work of inculcating habits of proper scientific observation, investigation, and inductive thought.

Throughout the year many places where principles taught in physics are practically applied were visited by pupils.

The Eckington railway and electric engines, the gas-works, the telephone exchange, the headquarters of the Western Union Telegraph Company, the Weather Bureau, etc., were some of the places so studied under the direction of Mr. J. B. Daish.

Much assistance was rendered by the manual training teachers in the construction of apparatus by third-year pupils, for which acknowledgment is gratefully made.

Early in the fall of 1888 an attempt was made to supplement the principles taught from the text-book by a knowledge of their practical application. Mr. Daish, in furtherance of this idea, organized the "science seminary," to which all pupils of the second-year class were invited. The meetings were held weekly; papers selected by the pupils

and approved by the teacher were read. Not infrequently the papers read were original; the range of subjects was wide; it was thought best to admit any paper which should have some bearing on true science, while as far as possible the practical side of the sciences was dwelt upon; frequently natural objects, rare fruits or other specimens, were exhibited and something said in reference to them. On two occasions the regular program was departed from and gentlemen of note kindly spoke before the seminary. To these gentlemen thanks are rendered for their assistance; to Prof. C. Abbe for his talk on "The Weather" and to Dr. David T. Day for his lecture on "Natural Gas."

As a result, beside an insight into the practical application of scientific laws to daily life, pupils were found to possess an investigating spirit; to read more scientific papers and magazines; to be imbued to some degree with the scientific spirit. If for no other reason, the experiment was a success in that it awakened interest and enthusiasm.

POLITICAL ECONOMY.

Third year.—The beginning of the first quarter was occupied with a series of lectures and informal class discussions which sought to ground the pupils in the principles of the subject; after which the text-book, Walker's Political Economy (briefer course), was used as a guide until the beginning of the fourth quarter, which was devoted to the investigation of such outside topics as were deemed beneficial to the class. Each pupil was appointed to study and report upon some subject, which was then discussed with the application of principles previously learned.

The members of the class were encouraged to attend the meetings of the various economic organizations of the city, through the kindness of whose officers invitations to the class had been repeatedly extended.

It is with pleasure that I acknowledge the courtesies of both the Washington branch of the American Economic Association and the Single Tax League.

GREEK AND FRENCH.

It is to be regretted that both Greek and French have been dropped from the curriculum; the cost of maintaining both is a mere trifle per pupil.

While the school is in no sense devoted to the work of preparation for college, the fact remains that a large number of graduates enter both classical and scientific schools, and are unable to fit themselves here as it is possible in high schools of an equal rank all over the country.

REQUIREMENTS FOR ADMISSION AND GRADUATION.

By the action of the board the competitive entrance examinations were done away with in June, 1886. Since that time pupils from the eighth grades have been transferred upon the certificates of their teachers and the approval of the supervisor and superintendent.

Without such transfer certificate it is impossible for an eighth-grade pupil to enter the school.

For pupils from other cities, private schools, etc., an entrance examination is held early after the opening of the term in September upon the principal studies of the grammar school, *i. e.* Wentworth's Algebra, through Chapter X; arithmetic, complete; United States History and Constitution; geography, complete; grammar and composition.

A certificate from a former teacher stating definitely that the required work for admission has been done by pupils from other cities has been taken in lieu of such entrance examinations. The number so admitted by examination and certificate in 1888 was 37.

Candidates for diplomas must pursue all the prescribed studies and at least three studies in the third year; students who from any cause fail to meet this requirement are enrolled as "unclassified" and can not graduate until the prescribed work is satisfactorily made up.

Pupils are encouraged to do the regular work of the school. The number of irregular students is kept as small as possible, yet it is inevitable that in so large a school such pupils shall exist. That pupils may not be disheartened at their failure to receive diplomas, certificates showing the amount of time, the subjects of study, and the degree of proficiency are issued.

EXAMINATIONS AND MARKING SYSTEM.

During the year 1887–'88 an experiment was tried in lessening the amount of formal written examination work.

In place of the quarterly test examinations formerly held, students whose work in every branch was satisfactory were excused, and only delinquents retained for the examinations.

The evil of "cramming" for marks was eliminated by this plan, while the stimulating power is retained in cases where it is needed. The general scholarship has not suffered in the least, and the reform has done away with many bad features of examination work.

After a careful investigation of the good and bad effects resulting from a numerical marking system, I am convinced that it would be to the advantage of both teacher and pupil to abolish the artificial stimulus of the present system, substituting a rational mode of marking, in general terms, as, *excellent, good, fair, deficient;* sending reports to parents, as at present, and keeping brief records on file at the office.

The objection to this plan exists in the present requirement of the board that all graduates who are candidates for the Normal School shall receive 65 per cent. of their rating upon their record in the High School.

With the strenuous competition for the forty positions in the training school and the frequent contests subsequent to the assignment of them, it would bring about a serious complication to grade the girls upon any more elastic system than the present.

Yet it is believed that the reform would be of large benefit to the entire body of students (1,400) while the present régime is maintained for the convenience of grading 40 pupils. With this in mind, attention is called to the subject of entrance to the Normal School.

LIBRARY.

The school library is the English teacher's laboratory; pupils have been taught how to work in this laboratory and how to use its various aids and appliances. Lists of books have been made by the teachers, and some of these have been prescribed and others recommended for outside reading, a constant effort being made to cultivate a taste for good and wholesome literature.

A course of so-called "library instruction," consisting of lectures delivered by the assistant librarian to each section separately, upon "The Use of the Library," with hints and suggestions with regard to profitable reading and the use of references in connection with the study of English literature and history, was given to the first-year pupils. This proved successful, as was indicated by an encouraging increase in the number of books drawn and consulted by the pupils.

In the report of last year attention was called to the poverty of the library in the following manner:

> It is to be regretted that the lack of money hinders the expansion of the library. Concerts are believed to interfere with the regular studies; solicitation of funds is discouraged, and the school is practically without resources to add new works imperatively needed, or to replace volumes destroyed by the wear and tear of circulation.
>
> It is desirable that the poverty of this department be recognized and relief afforded by allotting, in the estimate of school expenses, a small annual sum of $500 to the library.

Unfortunately this item was not especially recognized in the District appropriation bill.

With the small sum allowed for contingent expenses it is impossible to obtain an amount adequate to our needs by means of its funds.

I would therefore urge such a representation before the honorable Commissioners as will secure for us a direct appropriation, either as an amendment to the clause for contingent expenses or as a matter of independent legislation.

As has always been the case, the library continues to be the favorite resort of both teachers and pupils of the school. Owing to the lack of accommodations and the crowded condition of the school, its facilities during the past year have been more limited than ever, but the anticipation of new apartments has resulted in patient submission to many inconveniences.

Plans have already been made for a larger and more commodious room, where all may enjoy to the fullest extent every advantage for supplementary study.

In June, 1888, in anticipation of removal into the new building, the books and furniture were placed in storage, where they will remain until the room set apart for library purposes is completed.

The pamphlet library was largely increased, and its already numerous and varied subjects considerably broadened in scope. Books were purchased to the extent of 182 volumes.

Number of books rebound on requisition, 308.

Average number of books drawn daily, excluding reference books, about 100.

Twenty thousand drawn during the school year.

ENTERTAINMENTS.

An entertainment was given in the exhibition hall of the school, May 15, for the benefit of the library.

The program was varied and attractive, including both instrumental and vocal music, military and calisthenic drills, living pictures from Shakespeare, and a scene from Henry VIII. The amount of money raised was $321.15.

Such entertainments are enjoyable, and have a good influence in popularizing the school and familiarizing the public with its needs, methods, and capacity; but it is a very doubtful good when the loss of time and interference with important educational work is considered. Schemes for raising money should be made unnecessary by the special provision of funds requested.

The battalion held its competitive company drill in the same place on Friday evening, May 24, the judges being Capt. Constantine Chase, Lieut. R. D. Potts, and Lieut. Edgar Russell, Third Artillery, U. S. Army.

The companies conducted themselves with a precision and accuracy which reflected great credit upon themselves as well as their military instructor.

RHETORICAL EXERCISES.

An interesting feature of the school is the Friday rhetorical exercises, which occur at intervals of two or three weeks. They are looked forward to with great eagerness by the pupils, since they afford a pleasant relief from the routine of the week. The musical and literary talent of the school is given an opportunity to display itself, and scenes from the plays of Shakespeare, studied by the English classes, are sometimes represented.

LECTURES.

Dr. Bartlett and Dr. Hershey spoke briefly on the morning of December 5, at the assembly for devotional exercises.

On Tuesday the 22d of January, Prof. A. P. Montague lectured to the academic sections of the graduating class on "Virgil and his Works."

Sketching graphically the outlines of the poet's life and the age in which he lived, he then gave a brief analysis of the Eclogues, the Georgics, and the Æneid.

An absorbingly interesting lecture was delivered January 25, by Mr. George Kennan, on "Camp Life in Siberia." The novelty of the subject and the charming style of the talker held the school spell-bound.

Prof. Edward Pick lectured February 1, on "Memory."

March 22, the rhetorical hour was filled by Prof. J. W. Chickering, who spoke to the second and third year pupils upon "Roan Mountain," where he had spent a summer vacation, studying the peculiar people that George Egbert Craddock has made famous in "The Prophet of the Great Smoky Mountain."

April 5, Maj. J. W. Powell, of the United States Geological Survey, spoke on "The Manners and Customs of the Indians."

Besides these lectures delivered to the pupils of the school there was a series of lectures given in the High School hall to the teachers of the public schools of the District of Columbia, the speakers being H. E. Holt, Dr. Herbert B. Adams, Maj. J. W. Powell, R. J. Finley, J. A. Woodburn, Frederick J. Turner, Albion W. Small, Hon. Ainsworth R. Spofford, James MacAlister, and Prof. W. B. Powell.

To all these gentlemen thanks are most cordially given for their kindness.

CURTAINS IN EXHIBITION HALL.

In December, 1888, the exhibition hall was beautified by a new set of hangings for the stage, presented by the senior class.

AMATEUR AUTHORS' ASSOCIATION.

The Post's Amateur Authors' Association caused a large amount of competition in essay-writing among the pupils of the school. The prizes, gold medals, were awarded as follows: Third year, Miss M. E. Priest; second year, Mr. L. Denison; first year, Miss A. Cocks.

The success of this trial establishes the vital force with which prizes appeal to pupils, stimulating them to better efforts than the best that the most enthusiastic teacher can arouse without such incentives.

While believing in the general principle that pupils should be led to work through the enthusiasm and inspiration of the teacher, and that the artificial stimulus of gifts, premiums, and prizes is unwholesome, yet, when limited to an annual contest, the occasion is healthful and inspiriting to the mental life of students.

I should be glad to see established, for the High School, prizes in English composition and elocution, the award to be made at the school hall at a public evening gathering some time in May of each year.

Early in the year 1888–'89 an enthusiastic literary society was organized under the presidency of the assistant principal. It is composed of young ladies who intend to choose literature as a profession, either as

teachers of English or as journalists and correspondents. Regular journalistic work is prepared for each meeting; important events and topics of interest are reported in the style of the daily papers; Washington letters detailing the occurrences of the capital have been written, and several have been accepted by papers in different sections of the country.

CHANGES IN TEACHERS.

Miss H. E. Sharp, teacher of English, and Miss Sophie Neef, teacher of German, resigned in June, 1889. Miss E. R. Bogle, teacher of history, and Miss H. M. Hayes, teacher of mathematics, were granted a year's leave of absence for study in Europe.

Mr. Clement Dietrich died February 22.

SCHOLARSHIPS.

The college scholarships possessed by the school, some of which are allotted by competitive examination and others for superior rank throughout the course, were awarded as follows:

The Columbian University scholarship, to Miss M. E. Priest, who obtained the highest percentage for the three years' course. This is the first time a young lady has received this distinction.

The Georgetown medical scholarship, to Mr. A. L. Howard, having the best record for the three years of those who desired the scholarship.

The national medical scholarship to Mr. W. S. Thomas, on the same basis.

The Cornell scholarship to Mr. Emory Wilson, as a result of a competitive examination held June 1, 1889.

The Dickinson College scholarship, to Mr. H. E. Hinman, under the same conditions as the Cornell scholarship.

It is to be regretted that Cornell University has withdrawn the Birney scholarship.

GRADUATING EXERCISES.

The annual commencement of the High School was held at the National Theater on Thursday, June 20, Commissioner Douglass presiding.

The program consisted of an invocation by Dr. S. M. Newman, an introductory address by Commissioner Douglass, and a short but eloquent address to the graduating class by Rev. Dr. Bartlett, of New York Avenue Presbyterian Church.

Diplomas were awarded to 222 graduates by Secretary Blaine. During the exercises musical selections were rendered by the Marine Band, under the leadership of Mr. J. P. Sousa.

DEATH OF MR. CLEMENT DIETRICH.

The death of Mr. Clement Dietrich, clerk of the school, after a short illness of two weeks was a severe blow. His invariable accuracy and

reliability made him invaluable in his position, while his constant courtesy and generous disposition endeared him alike both to teachers and pupils. His influence was exerted outside the office not only by means of his connection with the Review, of which he was the editor, but also in many deeds of helpfulness to pupils. The entire school mourned his death as that of a faithful friend.

PHYSICAL TRAINING.

Physical training has received considerable attention. Exercise was provided for by means of manual training and battalion drill. These electives occupied two hours per week and were of such a nature as to produce the best development of muscle and endurance. The physical improvement of the cadets is marked in carriage, general bearing, erectness, and breadth of shoulder.

Base-ball, foot-ball, and kindred sports were well patronized by the majority of the boys. Clubs were organized and made subordinate to the general athletic association, which was under the auspices of the school and the particular charge of Mr. Harry English, instructor in mathematics.

The object of the athletic association was healthful development. The boys, by their own efforts, purchased a horizontal bar and parallel bars; while chest-weights and dumb-bells were already the property of he school.

The boys were divided into three sections, each under the charge of a leader, directly responsible to a director. The first exercise was with dumb-bells, in which all participated. The results of systematic training have been very valuable and we urge that definite, active help be extended to the boys in their efforts to build up some sort of a gymnasium.

A large class of girls was under the instruction of Miss Charlotte Smith for calisthenic practice, meeting twice a week and drilling with wands, rings, and dumb-bells.

At the entertainment in May these young ladies participated, giving an exhibition of accurate training, in graceful movement and muscle-developing exercise, which won for them and their instructor high encomiums.

The need of physical training for the girls, as well as for the boys, is emphasized.

BEGINNINGS OF A MUSEUM.

Regarding a museum, particularly in a high school where the pupils have attained an age when they can begin to appreciate the lessons it teaches, as an excellent educational factor, an attempt was made to add to the collection, which the school already has, through the instrumentality of the Saturday Club, which was organized in the spring of 1889. The members numbered twelve boys, taken from those having high rank in scientific studies.

The plan of the club was to make weekly excursions into the surrounding country for specimens of the District flora and fauna.

Gifts to the museum were solicited from the school, in response to which pupils brought many rare and valuable specimens, all of which, with the collections from the Saturday Club, were exhibited at the close of the year in the drawing-room.

Indebtedness is acknowledged to Prof. O. T. Mason, of the National Museum, for his many and valuable suggestions, and to pupils who so generously contributed to make the museum a success.

It is believed that in the future the museum will be valuable as an instructive and lasting object lesson.

BUST OF MR. PAUL.

Just after the death of Mr. Paul the natural and fitting desire of the pupils of the school to erect some permanent memorial of him, in the school itself, prompted the collection by them of a fund for that purpose. The services of Mr. U. S. J. Dunbar, a local sculptor, were secured, and a life-size portrait bust in bronze was made. On April 3, the anniversary of the day on which the school had assembled to hear the announcement of Mr. Paul's death, the bust was unveiled with simple ceremonies in which the pupils took part. It stands at the junction of the principal corridors on the main floor, as a constant reminder to all pupils of the school of him who did so much for its upbuilding and as an enduring tribute of their affection and respect.

PAY OF TEACHERS.

Table showing growth of the Washington High School.

Years.	Pupils.	Teachers.	Aggregate of salaries.	Average salary.	Cost of tuition per capita.
1882–'83	412	11	$10,950	$995.00	$29.83
1883–'84	524	13	13,850	1,065.00	28.50
1884–'85	656	20	18,400	920.00	30.77
1885–'86	745	24	22,426	934.00	32.59
1886–'87	810	28	24,719	884.00	31.89
1887–'88	980	30	25,399	847.00	25.91
1888–'89	1,107	33	28,595	866.51	25.83
1889–'90 (estimated)	1,387	41	35,325	861.58	25.46

The average salaray for the past year has been $866.51. With the growth of the school and the increased number of teachers the average for the coming year 1889–'90 will be $861.

It is discouraging, after obtaining an expensive college education and after some years of experience in teaching, to be unable to secure a salary equal that paid to the lowest class of Government clerks ($900).

We need teachers of inspiration, of energy, of ability, of experience; teachers who will impart strength as well as information—there is no

limit to the value of such a corps of teachers. To secure and retain such a force it is necessary to pay for it at its true valuation.

The limitation to the appropriation bill (H. R. 11651) for the year 1889–'90 that "no increase in salaries paid to teachers in grades now receiving $1,000 or more, except in cases of promotion to fill vacancies occurring before or after the passage of this act, * * * shall be made," is at present an obstacle to proper recognition of the value of teachers' services.

There is money enough to support all grades of education without either end of the scheme encroaching upon the other.

I would especially urge an increase in the pay of the assistant principal from $1,200 to $1,500, at which figures the thought, care, time, and labor are but poorly recompensed.

I beg leave to quote from the report of the board of trustees for last year:

Your attention is also called to the necessity of the removal or modification of the restriction accompanying the appropriations for the last three school years, prohibiting the increase in the number of teachers in any grades now receiving $900 or more. As pointed out in last year's report, our eighth-grade schools share in the general increased attendance of pupils from year to year, and, as the result of this restriction, we now have fourteen schools of this grade, to which we have been unable to assign eighth-grade teachers. In addition, our High School has grown from 827 pupils, when the restriction first went into effect, to nearly or quite 1,200 now; the result being that, with the salaries we have been compelled to offer, we have lost nearly all of our more experienced teachers, and have been compelled to form a teaching force composed almost wholly of young college graduates, of marked ability and acquirements in many instances, but wholly inexperienced, and whom we can not hope to retain at salaries less than $900 when they have acquired experienced efficiency in their vocation. We are compelled to admit that the High School has suffered from the causes here recited, and that its high and well-earned character can not long be sustained if it shall continue to be subjected to their operation. We submit, further, that no reason exists in the financial condition of the District which necessitates, or, in the opinion of the board, will justify, such curtailment of appropriations for its support as will impair its efficiency, or deny to the youth of the national capital, in the final years of their educational course, the benefit of experienced instructors, such as, in all other large cities, are intrusted with the conduct and management of similar institutions. We urgently recommend that, if any limitation whatever of this character is thought necessary, the limitation now be fixed at least as high as $1,200 instead of $900.

As a result of the efforts of Commissioners, Superintendent, and Trustees, the Committee on Appropriations increased the limit last winter to $1,000. It is more important than ever that the limitation be raised to $1,200 or abolished altogether.

EXPENSES.

The school provides for a large number of incidental expenses—for which there is no fund other than such means as can be obtained through bequests and entertainments.

Receipts for 1888–'89 to July 1, were	$1,419.86
Expenditures	1,172.97
Balance (to be expended for library books)	246.89

CONCLUSION.

Throughout the year the school has been indebted to Mr. J. J. Darlington and Mr. J. W. Ross, members of the High and Normal School Committee for many courtesies.

To them and to the Superintendent I wish to express my thanks for much assistance, and many kindnesses of both an official and personal character.

Very respectfully,

F. R. LANE,
Principal.

Mr. W. B. POWELL,
Superintendent of Public Schools.

WASHINGTON NORMAL SCHOOL.

WASHINGTON, D. C., *June* 20, 1889.

The Washington Normal School began its work of 1888–'89 with a class of forty members and its usual faculty. There has been no change in the essential features of the school organization during the year, but there has been a rather more detailed realization of the growth of the school plan than radical change in its general administration.

During the school year there was one withdrawal from the class, but the vacancy thus made was readily filled by the next waiting candidate for admission.

Many of the recitations of the year were held by and for the whole normal class together in order to preserve the unity of the class as a whole, and to give the class the benefit of the instruction and training of different minds rather than of one or two. In addition to the training in theory, there were lessons for the whole class in observation and criticism conducted by the method teachers of both the Webster and the Franklin sections in order to test the value of the methods of teaching in operation, the work of the pupil-teachers of the Normal School, the progress of the pupils of the practice schools, and to attain to a broader view and a higher standard of teaching than can be derived from the limited observation of the work and methods of one school. No efforts should be spared by those who are intrusted with the responsible work of training pupils to be teachers, to preserve the pupils from all narrowness of ideas and the practical application of them—for narrowness to a teacher is simply fatal to all her educative influence.

No inconvenience has been experienced from the location of the Normal School in two buildings rather than in one; but with the short distance between and the conveniences of modern communication at our instant command, the school is made one, while a clear advantage in health is derived from the walk in the fresh air by pupils going to or coming from the two buildings, not to mention the value of the greater practice afforded by the additional schools.

It would be a great advantage to the Normal School if to the practice chools could be added a fifth and even a sixth grade. The present teachers of the fourth grades of the practice schools might then be made supervising teachers of the fourth, fifth, and sixth grades of the practice schools. The successful extension of the practice schools by the addition of the fourth grade has been such an obvious good in affording the normal pupils insight into higher grade work that we are all the more desirous, since we have teaching force sufficient, to have added to our equipment higher grade practice schools. In such a case the normal class might be enlarged.

The pupils of the Normal School have had regular instruction in the theory and art of teaching language, reading, number, geography, penmanship, drawing, music, in psychology and the history of education. They have in each study made broad generalizations or outlines of the same; they have studied the psychology or bearing of each subject upon education in general; they have investigated the value of the study with reference to the education of the developing child; they have arranged a course of study suited to the capacity of the child, or have examined critically the prescribed course of study with a view to finding the reasons for the order and division of work contained therein. Last of all has followed the study of methods of teaching the branch in question.

Special effort has been made during the year to have the order of studies and the methods of teaching conform to the laws of mind operation. Psychology has not only entered into the study of each branch of ordinary education, but careful observations of the children have been made in the school rooms, the laboratory of the Normal School, to learn what were the strongest appeals to child interest, the most valuable methods of retaining that interest, the most economical use of school hours, the best ways of developing strength, sustained attention and responsibility in the children, for tasks no matter how small. Then, too, the reasons for mispronunciation, for false spelling, false expression of thought, unsystematic, inaccurate observation, different phases of apparent mental incongruities were sought and an effort was made to devise ways of overcoming them. It was found that at the close of the year, when the formal examination of text-book psychology seemed desirable, that the class was ready for the work, for the principles of psychology, for which their own class-room observations and experience had prepared them. Instead of coming to psychology as a great mystery of abstruse terms, they found it was but the expression of men of experience and wisdom in the solution of the very difficulties of mental action which the normal pupils had tried to solve.

Special attention has been given to geography. Excursions were made by the normal faculty, normal class, and pupils of the third and fourth grades to places of interest in and around the city. During these excursions models were made in sand of localities visited, map

symbols were devised and applied by the pupils of the practice schools in the class-rooms after the excursions, compositions were read in class upon the field work done by the pupils. In this way a better understanding was attained of elementary observed facts, of surface drainage, climate, productions, etc., without which it is impossible to have a clear conception of the fundaments of geography.

Hand in hand with the study of surface, the representation of contour, and the reading of maps, were carried on the experiments of the class-room to teach the simple facts of heat, cold, evaporation, condensation, movements of the air, moisture in the air, and such facts of drainage as the immediate vicinity illustrated, in order that the children might not only see the phenomena of the earth, air, and sky, but might in some measure appreciate their beautiful uses and interdependence. Nor were these experiments simply to amuse. They were made the basis of compositions written and read by the children, the best of which in some cases were hektographed for class reading; so that in this way matter was actually composed by the children as well suited to their capacity, as vitally interesting to them, as well understood by them as the speech of their every day hours shows their little unfolding of daily life to be. Can better subjects be given to children for composition than this matter so simple, so interesting to them—matter which not only instructs and delights them but makes their language work for them just what all literary productions should be, the simple, beautiful expression of what one sees and knows, rather than the labored attempt to tell what one does not know.

Such work, moreover, is not confined to the practice schools alone, but is realized through all parts of the city. The work of the third grades particularly has attracted attention of many teachers of the city as well as educators visiting the city.

It has been a constantly increasing pleasure to note the progress that has been made in the scientific work as the basis of composition or language work. Although the description of pictures and tableaux occupies the first few weeks of the year, its place is soon taken by that of the human body, animal, geography, and plant lessons. The last especially has proved very valuable as training in seeing and describing. The children have planted seeds, have studied the growth of plants, have examined specimens of buds, plants, and flowers of the abundant spring, they have made herbariums of their own, and have in some sections represented the preserved specimens by painting them. We hope that next year this latter experiment of work in color will become an integral part of the eye and hand training of the lower grades.

The universal interest in composition that has been created by the effort to organize the amateur authors' association has proved to be a revelation of the value of regular, systematic, consecutive training in thinking and the expression of thought. The compositions of the first grade for logical arrangement and for correct form and expression,

however elementary may be the subject-matter treated, would do credit to grammar grades. If four years of this training yield so valuable and practical results, what must be expected from a similar continuation of the work through one decade.

An important experiment conducted in the normal practice schools of the first grade, under the direction of Professor Spencer, has proved to be a very profitable one. Hitherto comparatively little attention has been given to the proper training of little children in the matter of penmanship except that they be led to write legibly. Professor Spencer has succeeded, with the assistance of Miss Copenhaver, Mrs. Myers, and the pupil-teachers of the Normal School, not only in getting legible writing but in obtaining beautiful, bold, free, rapid writing. The children are led to habits of good position of the body, to good holding of the pencil, to control of the muscles of the whole arm, forearm, hand, and fingers. The writing, while better than in former years, is much more free and rapid. This result has been accomplished through untiring observation and training of the pupils. It is not a fine theory but actual accomplished fact. The writing by this method becomes a matter of fine mental and physical development, not a mere servile imitation of copy.

Looking to command of the body for penmanship and other hand work, health exercises have been introduced into the Normal School and naturally taught by the Normal School to the children of practice schools. Exercise in breathing, in taking graceful positions, and carriage and movement, to control the muscles of the whole body, have been introduced and taught by Mrs. Myers. It is earnestly desired that these exercises, which are doing so much for the children in the practice schools, may have wide-spread and universal trial throughout the schools. No one thing would do more to improve the health of the pupils than this.

Aside from the excellency of the technical training in drawing that has been given to the practice schools, it is my pleasure to acknowledge the superb course in art that has been given to the Normal School. They have not only been instructed so as to teach the fine course of the schools, but have been afforded admirable opportunities for learning to sketch, to mould in clay, to study the history and development of painting, sculpture, and architecture. Lectures on art have been given by Mrs. Fuller and Mr. A. G. Heaton. Under Miss North's direction the pupils have visited the art exhibition of the Cosmos Club, the Garfield Hospital Loan Art Exhibition, and the Corcoran Art Gallery. Tours have been made to different buildings of the city to study the different styles of architecture, so well illustrated in the fine buildings of our capital.

The sewing hour each week, in charge of Mrs. Weaver, has proved interesting and valuable.

Opportunities for general culture afforded the class have been numerous. Lectures have been delivered by Major Powell and Professor

Thompson, of the Geological Survey; by Prof. Lester Ward, by Dr. Mayo, Mr. A. G. Heaton, Mrs. Fuller, and Superintendent Powell.

The normal class, together with the teachers of the city, enjoyed the rare privilege of attendance upon such a superior course of lectures as the teachers' course upon American history. Probably no one thing has given greater impulse to sensible and enthusiastic teaching of American history than this course by specialists, so well calculated to enlarge the outlook and knowledge of all those in attendance.

It is my pleasure to acknowledge the fine work and kind co-operation of teachers throughout the city, the loyal and efficient support of the faculty of this school, and your unfailing interest and kindness every day of the school year. In liberal provision of the needs of the school, in lectures, in watchful care of the progress of the school, in counsel, courtesy, and the generous benefit of your large experience, the most successful year of the school has been a realization.

With a class of well-trained pupils, whose industry and interest during the year have been unflagging, with the intelligent work of the assistants of the school, with the kind courtesy of the Commissioners of the District, the board of trustees, and last of all with the fine assistance of the superintendent, I have the honor to report the most practical and successful year of the Washington Normal School.

I am, yours very respectfully,

EMMA S. ATKINSON,
Principal.

DRAWING.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: I have the honor to present the following report in which I have endeavored to give briefly aims sought, results obtained, and some suggestions as to future efforts in the department of form, study, and drawing.

Do your children improve in the development of correct ideas of form as seen in their varied surroundings?

Is there improvement in the awakening of a desire and determination to express these ideas truthfully?

Is there increase of ability in the use of the tools and materials necessary for the expression of these conceptions?

Is there any better appreciation of the wonderful construction and infinite beauty of natural forms?

Is there any increase of power to discriminate between the good and the bad in art forms?

Are we, as instructors, selecting methods directed toward these ends? These are questions that press upon us at the close of each year's work, and that must be fearlessly and conscientiously met.

It can not be doubted that making is a means of obtaining the systematic observation necessary to a knowledge of form, observation of

the specific form being essential to the construction and observation of related forms incited by it.

This making as described in my last report has been continued. In every grade the making is part of the regular course and the work has been faithfully done by the teachers, reaching every child. I think I may say, from observations made by myself and from the testimony of the teachers, that more correct ideas of form have been the result. Another means to the same end is object-drawing. Observation for the purpose of representation must be thorough and orderly. A more determined effort in this direction has been rewarded by decided improvement, but there is inequality in the work done by different teachers, not so much in the drawings obtained as in the methods of obtaining them and the resultant training.

Is there increase in the desire and determination to express truthfully? The desire for expression is the law of our being and success its crowning glory. The desire for the expression of form and color in some tangible material is perhaps more universal among children than any other. This natural desire should be carefully preserved and employed in the development of the desire and *determination* to express *truthfully* which must to some extent be aroused before anything of value can be accomplished.

To train a child to draw means to arouse in him this kind of interest and to make it intelligent. In this effort we must not fail to realize the blindness of the eye until it has been inspired by an intelligent interest in the object towards which it is directed. Every good teacher knows that the plan of a lesson is incomplete unless it includes this element, and yet it is often omitted. There are teachers who have no other method of arousing interest than that of keeping themselves wrought up to a pitch of exaltation and enthusiasm which is supposed to be, and is to a certain extent, inspiring. Unfortunately, however desirable this condition may be, the average human being is not able to sustain himself there five days in the week throughout the school session. There are more genuine and less exhaustive devices that a little thought and a better appreciation of the value of the lesson would suggest. There is no more painful experience in supervision than to enter a school room where a conscientious and hardworking teacher is laboring to get results that would be easily obtained if the children could see any reason for what they are doing, or if some sufficient motive for effort were presented. For example: That drawing is a language to be used for describing things is a thought that will often give a stimulus to the mind of a child. I do not mean the simple assertion, but the encouragement to use drawing in this way; to take home to their parents or others such descriptions, especially of things that are curious in form, and to bring to the teacher a few lines describing exactly some familiar form as to its shape and proportions. To one who has no conception of drawing, except as drudgery to be gone through with before

learning to paint, and who is ignorant of the manifold uses to which drawing is applied, such a thought never occurs.

I do not speak of lack of interest as a general fault in the schools of this city; on the contrary, the schools in which the drawing lesson is not popular are the exceptions, but the interest is, in some cases, a general liking for the subject and is not so centered as to assist in obtaining the object for which the special lesson is given. If more thought were given to this subject a great improvement would be made.

The third query involves the consideration of many subjects. Form study and drawing as now taught includes the use of many materials. To the handling of the pencil in drawing much attention has been given for the past year, for much was required. The principal fault in execution has been a cramped position, timidity in the drawing of lines, too much dependence on the eraser, lack of freedom in the movement of the hand and arm. To obviate these faults special attention has been given to the pencil drills and much good has been accomplished, but the breaking up of bad habits and the formation of good ones are slow processes, even if the exercises are perfectly given. It is only "little by little" that freedom and precision of movement can be acquired. The general faults to be corrected in the manner of giving the exercises are too little attention to the position of the body, a lack of precision as to length and direction in the movements given before taking the pencil, and a failure to make attention to the subject continuous. We hope to make decided improvement in this direction the coming year.

The course in clay molding was thoroughly and systematically carried out in the first four grades. Much excellent work was done in the other grades also. Lessons in each division were given to the teachers of these grades, who will, however, require further instruction the coming year, as the material is new to them and its handling and limitations are not well understood. A few good plaster casts in every building, to illustrate the treatment of material, would be of great service.

Sticks are used only in the first and second grades. Paper being the material most available for general use is used in all grades. In the first four it is used in the construction of the plane geometric forms and their combinations in design. The past year's course was unchanged from that of the previous year, but the results were better. A decided improvement in the drawing of the forms was noticeable. A heavy manilla paper is used in grades from five to eight, inclusive, for the making of patterns from working drawings. The above-mentioned materials are all supplied to the schools, and the result is the giving to every child some training in the manipulation of material. Many other materials are used, for, as skill increases, ideas develop as to what can be done by the aid of working drawings; also suggestions of the various applications of designs are made, and a desire for the working out of these ideas in varied and finer materials is created, so that many supply their own materials. To guide this impulse aright requires thought and

good taste on the part of the teacher, and great improvement was noticeable the past year. Less of the bizarre and more of the artistic element was displayed in such work. In this application of designs for decoration to materials that the children could use, a decided advance has been made in grades above the fourth. Paper, needle-work, and clay are the materials found most available.

In drawing plant-forms from nature the results of the instruction given were noteworthy. A large collection of drawings of leaves, branches, and flowers might have been made that for truthfulness and grace of expression would command admiration from an artistic standpoint. A much greater work, however, was done in directing so many minds to the wonderful variety and beauty revealed in these common but comparatively unknown, because unobserved, forms, and this was accomplished by the order of observation and expression required—first, the general form rendered by the free-hand blocking; second, in the leading lines of growth; third, details and modification of contour.

COLOR.

Except in the High School, color has not usually been incorporated in any course of form-study or drawing, but some attempts have been made recently to arrange a systematic course in color for lower grades. How far these attempts have been justified by results I have no means of knowing. I am sure there is a growing conviction that something should be done if the difficulties in the way can be surmounted. But practical difficulties are never surmounted in the laboratory of the brain. It is only by the doing so far as we know that ways are opened. So I have ventured to arrange a short course in color for the third and fourth grades, that I think has within it elements of growth which, with your approval, will be presented the coming year.

EXHIBIT.

No general exhibit was held at the close of the year. The teachers in each building collected and arranged the drawings and constructions made by the children, and extended invitations to parents and friends; in some cases each school displayed its own work in its own room, in others several united.

These local exhibits seem to have been very popular. They gave to each child opportunity to show something he had done to those most interested and brought parents, teachers, and scholars together socially. They were remarkably well attended.

NORMAL SCHOOL.

Realizing the important part that the Normal School plays in supplying the schools with good teachers and new methods, much time has been given to normal training in drawing, and to the supervision of the lessons given by Normal pupils in the practice schools. Excellent work was done by Miss North in this department. Very fine work in the

molding of historic ornaments and foliage was done under her supervision, in connection with which a course of instruction in historic ornaments, with illustrations, was given; visits were made by the class to the Corcoran Art Gallery and to such exhibits held in the city as were considered educational.

In addition to the course designed especially to make good teachers of drawing, a course is given each year in free-hand blackboard sketching, designed to increase the ability to illustrate the various subjects in the teaching of which such illustrations are useful.

The course necessarily takes a wide range of subjects for practice, from simple objects to the human figure, but the training that runs through all is directed to the cultivation of the power to detect and render the lines that are of most importance in the expression of the leading characteristics of the subject as to form and texture. All materials have their limitations; it is a waste of effort to attempt with chalk and blackboard effects that require finer material. To accomplish all that is desirable in such a course would take more practice than Normal pupils can get in the time that it is possible to devote to one subject, but the many good drawings seen in the school-rooms where Normal graduates preside show that something of value is done.

HIGH SCHOOL.

The admirable course of instruction pursued in the High School and the excellent results obtained need no comment.

I desire, however, to call attention to the fact that with an increased number of pupils there is increase in the demand for facilities, keeping pace with the demands in other departments.

The average enrollment of the High School 1,253, with prospect of increase the coming year. Each pupil receives one lesson per week, and 200 of them two lessons. To do this work the teacher of drawing has one assistant and one room properly fitted. This makes it necessary, especially in the first and second year, that classes containing a large number of pupils, in some cases as many as 100, should be taught by the assistant in the large study halls and the time for lessons shortened.

I would also call attention to the number of teachers employed compared with the number employed in other branches of education. Many of these branches are elective, and include in their classes but a small portion of the enrollment; yet three, four, or five teachers are employed.

That with these drawbacks the results have been kept to so high a standard is due to the untiring industry and skillful instruction of Miss Wilson.

I hope that it may be possible to provide for the needs in this department in the near future that the growth in the High School may keep pace with that in lower grades, as it certainly will if sufficient facilities are given.

Permit me to avail myself of this opportunity to express my thanks to the teachers for their cheerful and efficient aid in the introduction of new subjects and methods, and to the supervising principals for their hearty coöperation whenever it has been necessary.

It also gives me pleasure to acknowledge the faithfulness and efficiency of the assistant teachers in their work of supervision.

To yourself is ever due grateful acknowledgment for uniform kindness and helpful support.

Very respectfully,

S. E. FULLER,
Directress of Drawing.

Mr. W. B. POWELL,
Superintendent of Public Schools.

MUSIC.

WASHINGTON, D. C., *June* 30, 1889.

DEAR SIR: The exchange of the old series of music books and charts (used in the first six grades) for the new series has resulted as we hoped it might, and given to teachers and pupils a greater interest in the study of music.

I am glad to be able to say that in the first, second, third, and fourth grades (over which I have special supervision) there has been a steady improvement in the singing. My assistant, Professor Daniel, reports a decided improvement in the fifth, sixth, seventh, and eighth grades.

I have visited as many of the schools under his supervision as my limited time would permit, and I have found them doing good work.

An exhibition of our regular work in music was given in the fourth division in the Jefferson School in February, at which you were present and expressed much gratification with what you there witnessed. Equally as good work could have been shown in the other divisions. As the teacher becomes better acquainted with the system and with the methods of presenting the same better results are realized.

The singing of the High School has been very creditable indeed.

The work of the Normal School has been better than heretofore, the pupils having gained considerable proficiency in teaching music.

The summary of our rating is as follows:

Number of schools considered—

Excellent	155
Good	187
Fair	36
Poor	11

Hoping the work in this department has been satisfactory to you, I remain,

Very respectfully,

F. H. BUTTERFIELD,
Director of Music.

Mr. W. B. POWELL,
Superintendent of Public Schools.

SUPERINTENDENT COOK'S REPORT.

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SUPERINTENDENT COOK'S REPORT.

OFFICE OF SUPERINTENDENT PUBLIC SCHOOLS,
Washington, D. C., November 1, 1889.

GENTLEMEN: I respectfully present herewith a report of the colored schools of Washington and Georgetown, which embraces the seventh and eighth divisions of the public schools of the District of Columbia, for the year ending June 30, 1889.

The entire number of schools in these two divisions was 186, an increase of 10 over the school year 1887–'88.

They were classified as follows:

Normal School	1
High School	1
Total	2
Grammar schools:	
Eighth grade	7
Seventh grade	8
Sixth grade	14
Fifth grade	17
Total	46
Primary schools:	
Fourth grade	20
Third grade	*28
Second grade	†37
First grade	†48
Total	133
Manual training schools	3
Cooking schools	2
Total	5
Grand total	186

* One school under instruction of assist ant teacher in Normal School.

† Two schools under instruction of assistant teachers in Normal School.

The whole number of pupils enrolled was 11,170. They were enrolled in grades as follows:

Normal School	40
High School	416
Total	456
Grammar schools:	
Eighth grade	269
Seventh grade	314
Sixth grade	629
Fifth grade	799
Total	2,011
Primary schools:	
Fourth grade	1,000
Third grade	1,446
Second grade	2,007
First grade	4,250
Total	8,703
Grand total	11,170

The whole number of teachers employed was 202, of whom 185 were female and 17 male. They were employed as follows:

Supervising principals	2
Normal school	5
High school	11
Grammar schools:	
Eighth grade	7
Seventh grade	8
Sixth grade	14
Fifth grade	17
Primary schools:	
Fourth grade	20
Third grade	27
Second grade	35
First grade	46
Teachers of music	2
Teachers of drawing	1
Teachers of manual training	3
Teachers of cooking	2
Teachers of sewing	2
Total	202

The cost of schools for supervision and teaching was as follows:

Supervision:	
Superintendent	$2,250.00
Clerk	800.00
Supervising principals, two	4,000.00
Messenger	200.00
Total	7,250.00
Cost per pupil (estimated on average enrollment, 9089)	.79
Normal School:	
Principal	1,500.00
One teacher	830.00
Three teachers	2,065.00
	*$4,395.00
Cost per pupil (estimated on average enrollment, 40)	50.50
High School:	
Principal	$1,800.00
Ten teachers	8,930.00
	10,730.00
Cost per pupil (estimated on average enrollment, 334)	32.12
Grammar schools (7 eighth, 8 seventh, 14 sixth, 17 fifth grade schools)	36,060.00
Cost per pupil (estimated on average enrollment, 2,184)	16.51
Primary schools (20 fourth, 28 third, 37 second, 48 first grade schools)	†64,925.00
Cost per pupil (estimated on average enrollment, 6,531)	10.30
Special teachers (2 music teachers and 1 drawing teacher)	2,710.00
Cost per pupil (estimated on average enrollment, 9,089)	.30
Teachers of manual training schools (of carpentry 2, of metal working 1, of cookery 2, of sewing 2)	4,765.00
Cost per pupil (estimated on whole enrollment, 2,495)	1.91
Average cost per pupil for tuition in all the schools (based on average enrollment, 9,089)	‡12.66

ATTENDANCE AND SCHOOL POPULATION.

The whole number of pupils enrolled during the year was 11,170. The average number of pupils enrolled was 9,089. In the entire enrollment there were 130 more than in the previous school year; in the average enrollment 298. The average number of pupils in daily attendance was 8,588, which shows the per cent. of attendance, based on the average enrollment, 94.4.

There has been quite a steady increase in this school population since the establishment of these schools in the face of conditions that would seemingly oppose. Supposing that the rate per cent. of increase in the population is about the same as the average for the year in the period embraced between the taking of the census in 1880 by the United States and that of the census of 1888 by the District of Columbia, the school population of these two divisions is not less than 16,000. The

*Includes the cost of teaching 5 practice schools.

†To be increased by the cost of teaching five practice schools ($2,374.88.)

‡Excluding special and manual training schools.

average enrollment of this population in the schools during the year was 9,089, or 56.8 per cent. of it. The entire enrollment of it in the schools was 11,170, or 69.8 per cent. of it.

From this showing it appears that about 4,830 children of the legal school ages received no instruction whatever from the public schools.

Private schools among this population are very rare. Those who are able to patronize them generally seek, in preference, the advantages offered by the public schools. The same paucity exists with regard to the parochial school.

To obtain something definite with regard to enrollment in the private and parochial schools for colored children, I recently caused a circular letter to be addressed to the principal of each of the public schools, soliciting inquiry through teachers and pupils as to the location of said schools. Having obtained their location, the inquiry was followed by another to the teachers of those schools, as to their present enrollment. By this means I have learned that there are enrolled in these schools, private and parochial, 477 pupils, of whom 170 are in the former and 307 in the latter. Their ages vary from four to eighteen. As many of the children enrolled in these schools are without the limits of the legal public-school ages, the opinion heretofore formed, largely from observation and by inference from circumstances, has been fully verified. These facts forbid the probability that any considerable part of the large number of non-attendants at the public school received any school instruction whatever at any time during the year.

For a period of many years, reaching back to the earliest history of the schools, thousands of children of the legal school ages have, for at least one year, received no benefit from the system of public-school instruction in their midst; and the probability is that hundreds, if not thousands, have received none at any time during the entire period of the existence of the schools. In the large degree of illiteracy thus piled up and piling up, there are not only weighty and serious responsibilities, but also possibilities for evil.

To what extent this illiteracy is self imposed is a question, as due provision, either in accommodation or in teaching force, has not been made in any one year of the schools. The enrollment of the school-population in the public schools has thus far in the history of the schools kept pace with the provision made. In the question, whether in greatly increased provision for its enrollment the parallelism in this respect thus far maintained will continue without resort to compulsory means, so much of uncertainty enters as to require trial before answer.

Should a comparison between the respective enrollments of the white and the colored school population in the public schools be instituted, it would show them proportionately about the same, even if the comparison should be carried back several years. Should, however, a comparison be made between the two classes as to the number of children of each class of the legal school ages that can not write, as shown by the

United States census of 1880, the colored will be to the white about as 11 to 2.

There seem two sources through which to account for this great difference—the private school and the lettered home. To obtain instruction through the first source requires pecuniary means; through the second source, years of opportunity for growth and culture. To require of the colored youth to any considerable extent a knowledge of the letter through these sources would be to require that he make "bricks without straw."

To remove this large degree of illiteracy, to even up, as it were, these elementary attainments between the two classes of youth, must be the work of the public school. It must come to the aid in making provision, whose use must be determined by *need* rather than by *number*.

FLUCTUATIONS IN ATTENDANCE.

The fluctuations in attendance were not so great as in the previous year. The greatest difference in the number of pupils on the rolls the last day of the month, between any two months of the year, was 1,804, as shown between October and May. The difference between any two consecutive months was 402, as shown between April and May; in the previous year it was 736. The average monthly decrease for the year was 167; in the previous year it was 178. In the indication of greater permanency in attendance and, through attendance, larger acceptance of school privileges, these figures are favorable.

The average number of pupils to the teacher was less than that of the previous year; this has been effected by reducing, wherever practicable, the maximum limit from 60 to 50 pupils, and it is to some extent due to the fact that the increase in the per cent. of enrollment was not so great as that of the previous year.

[Normal School not included in this table.]

Months.	Pupils on the rolls the last day of each month.			Average number to the teacher.			Average number of pupils on the rolls each month.			Average number to the teacher.		
	1887-'88.	1888-'89.	Increase.	1887-'88.	1888-'89.	Decrease.	1887-'88.	1888-'89.	Increase.	1887-'88.	1888-'89.	Decrease.
September	9,413	9,714	301	55	53	2	9,056	9,271	215	53	50	3
October	9,645	9,841	196	56	53	3	9,686	9,928	242	57	53	4
November	9,423	9,602	179	55	51	4	9,676	9,757	81	56	52	4
December	8,687	9,209	522	51	49	2	9,092	9,459	367	53	50	3
January	8,532	9,149	617	50	49	1	8,707	9,237	530	51	49	2
February	8,413	8,817	404	50	47	3	8,477	9,019	542	50	48	2
March	8,222	8,624	402	49	45	4	8,319	8,799	480	49	46	3
April	8,182	8,439	257	48	44	4	8,224	8,546	322	49	45	4
May	7,937	8,037	100	47	42	5	8,108	8,202	94	48	43	5
June	7,806	8,208	402	46	43	3	7,889	7,957	58	47	42	5

The following table shows the entire and the average enrollment of pupils, and the number of pupils in daily attendance, each with per cent. of increase, and the percentage of attendance, based on the average enrollment, for the last ten years:

[Normal School not included in this table.]

Years.	Whole number enrolled.	Per cent. of increase.	Average number enrolled.	Per cent. of increase.	Average number in daily attendance.	Per cent. of increase.	Per cent. of attendance.
1879–'80	8,061	4.26	6,573	4.58	6,412	4.63	97.4
1880–'81	8,146	1.05	6,567	.....	6,342	.....	96.6
1881–'82	8,289	1.75	6,763	2.98	6,536	3.05	96.7
1882–'83	8,710	5.07	7,070	4.53	6,815	4.26	96.2
1883–'84	9,167	5.24	7,225	2.19	6,895	1.17	95.5
1884–'85	9,598	4.70	7,689	6.42	7,287	5.68	94.9
1885–'86	10,138	5.62	8,191	6.52	7,756	6.43	94.6
1886–'87	10,345	2.04	8,448	3.13	7,956	2.57	94.2
1887–'88	11,000	6.33	8,754	3.62	8,366	3.89	94.4
1888–'89	11,130	1.18	9,049	3.36	8,549	3.42	94.5

The above table, in addition to the information afforded, is interesting in indicating the growth of the schools in numbers and attendance during the decade ending with last year. The increase in the enrollment is 3,069, as shown by the difference between that of the first and that of the last year named. The yearly per cent. of increase in the entire enrollment varies—the greatest being 6.33 and the least 1.05. The average for the period is 3.08.

DISCIPLINE.

The statistical items respecting more particularly penal discipline, and furnishing some idea of the deportment of the pupils, compare quite favorably with the same items of the previous year. There were 94 cases of corporal punishment, or about one to every one hundred pupils of the average enrollment. A comparison between this number and the number of cases in the first year of the years presented in the table that follows, indicates far less resort to this method of punishment, and the substitution of milder and more judicious means of discipline.

The cases of suspension for the year were 267, or about two for every one hundred pupils of the average enrollment. The improved record in this item during the two previous years was maintained.

The number of pupils dismissed from the schools during the year was 8, or one less than in the previous year. These dismissals were not of such character as to preclude re-admission to the school the following year.

There were 3,868 cases of tardiness. The per cent. of tardiness was about one-tenth of one per cent. The record for punctuality in attendance as shown by the cases of tardiness is in good support of that gained

and maintained during the last ten years; and, indeed, when the circumstances of very many of the children are considered, it is remarkable. In its education to one of the habits that offer most in life it can not be over-estimated.

The following table presents the cases of suspension, corporal punishment, dismissal, and tardiness in comparative view during the last ten years.

[Normal School not included in this table.]

Years.	Average number of pupils enrolled.	Corporal punishment.		Suspension.		Number of cases of dismissal.	Tardiness.	
		Number of cases.	Number of cases to every 100 pupils.	Number of cases.	Number of cases to every 100 pupils.		Number of cases.	Number of cases to every 100 pupils.
1879–'80	6,573	663	10	397	6	86	1,478	22
1880–'81	6,567	562	8	437	7	59	1,844	28
1881–'82	6,763	396	6	327	5	23	1,759	26
1882–'83	7,070	157	2	330	4	8	2,035	28
1883–'84	7,225	135	2	346	5	13	2,352	32
1884–'85	7,689	186	2	319	4	8	3,462	45
1885–'86	8,191	159	2	250	3	3	3,906	47
1886–'87	8,448	110	1	187	2	4	3,345	39
1887–'88	8,754	78	.....	226	2	9	3,720	42
1888–'89	9,049	94	1	267	2	8	3,868	43

COURSE OF INSTRUCTION.

Systematic and orderly plans of work in the school-room are recognized as invaluable in the economy of time and effort. The course of study indicates the lines along which public instruction in the District advances. Based upon recognized educational principles, both in the order of subjects to be taught and in the methods of instruction suggested, its drift in the development of the pupil's powers, and giving the ability to use them, is being realized more and more.

The work of the first years of school life is increasing in satisfactory results, and, in the basis being formed by due unfolding of the perceptive powers through the greater degree of sense-training, there is promise of greater growth and of more satisfactory results in the years to follow for the completion of the present course.

The ends sought in *language-training* is to give ability to use language with accuracy and facility in the expression of thought. From the correct statement of the simple fact he learns, the pupil is led step by step to connected statements of his own, conveying information obtained either from studies pursued or other sources. The elements of grammar to the extent needed for correct, clear, and forcible expression are gradually developed.

In the attainment of a good degree of proficiency in the correct expression of thought, there is seemingly an irrepressible conflict between the forces of the school-room and those of the illiterate home. There example holds such sway that the attainment of skill demands in the school-room precept upon precept and example upon example. It is in the increased and increasing recognition of existing conditions, and the means for their betterment on the part of the teacher, that progress in this subject is being made and greater progress assured.

That *reading* often fails to receive the attention its importance demands is but too well known, through large want of satisfactory results. This fact is not wholly due to want of appreciation of its value, but often to its sacrifice to other subjects of supposed greater value. In its large contribution of essentials to proper development it has no superior among the studies of the course, and in such respects presents strong claims for greater recognition. It contributes to physical development, in the drill for distinct articulation and clear enunciation; to intellectual, in the power for discrimination and analysis; and to moral as a means through which may be gathered essential material in the formation and development of character. In the frequent occasion for collateral uses, in widening the scope of, and broadening the processes in, other studies, it has no rival in the opportunities for best attainment.

Differences of results in it are, however, more often due to the differences in the efforts of teachers. This is often seen in the case of pupils who in the course of promotion are transferred from a lower to a higher grade. In the lower grade their reading attainment to the extent of capacity to understand was excellent, showing the result of careful and persistent attention and training, as well as intelligent appreciation of its merits as a study. The want of due effort in the succeeding grade is shown either largely by disuse, or, by what is worse in its present and after effect, that indifference which satisfies itself in merely having the words called without concern for thought-grasp and as to the manner or means for its most effective expression. Teachers are beginning, however, to realize more and more that this subject must receive that attention necessary to make it a means of mental development, to confer power to read without effort all matter within the capacity of the understanding. The aim to extent opportunity offers should be to give power to read understandingly and with good vocal expression, ability to discriminate between the good and the bad in literature, and to develop the taste for the good. In proportion to the attainment of this aim will be the measure of success.

Considerable attention was given to the subject during the year and, it is believed, with improved results. There is yet, however, much room for improvement both in training, to permit the thought-grasp, and in vocal culture, for correct articulation and clear enunciation. In the large indistinct articulation, in the weakness of voice, and in the general manner of expression is unmistakably revealed the want of a cul-

tured home. To remove these defects there must be energetic and unremitting effort.

A sore need in these schools is that of sources through which to obtain special or general information. In this respect pupils are at exceeding disadvantage, and markedly so in all efforts at competition in which success is made to depend largely upon the aids furnished by the library. The homes are very few where may be found any considerable collection of books, and generally where found they show only the natural collection of simple, uneducated tastes, and not the products of broad, varied culture, in which are stored the general growth and progressiveness of the world's thought and action. It is true that very considerable effort has been made by teachers and pupils to establish school libraries in these divisions, and as the product of such effort creditable beginnings exist, but the means for their establishment being almost wholly restricted to school concerts and entertainments, and these in turn to such bounds as will promise least disturbance to the economy of the school, their growth is necessarily slow. The circumstances already indicated prevent additions from the home.

The benefits to be derived from a good library of reference can not be overestimated either in immediate or in permanent results as an educational factor. The pupil in these schools, if he is to get most from training through proper pursuit of the different subjects prescribed by the course of instruction, must have placed within his reach the great and essential aids which a large supply of collateral reading furnishes.

In the large use of the objective in teaching *arithmetic*, particularly in the lower grades, by which relations are more clearly seen, and the greater adoption of methods based upon correct principles, as stated in my last report, this subject grows in favorable results.

It is yet a question, however, as to whether or not too much is attempted to permit, in the general grade requirement, the attainment of the most the study offers, either in the mental discipline it gives, or in the practical benefits it confers.

DRAWING AND MANUAL TRAINING.

In this department of school work the schools are moving forward. The public exhibit of the schools near the close of the previous school year gave healthful stimulus to the work of last year. Through school and grade arrangement of the work exhibited, teachers and pupils could, in the comparison and contrasts presented, easily see both the defects and the excellences. The lesson given and received was to avoid the former and strive for the latter. The exhibition in June last afforded excellent opportunity for obtaining, through the much and varied work displayed, an estimate of its development and progress. The work was presented in systematized form, beginning with the lowest or first grade school and advancing step by step through the High School. That of the first-grade schools was shown in one room and so arranged

as to present the subject, manner, and method of instruction, beginning with form study, in clay modelling, stick laying, and paper folding, followed by drawing, and that of the remaining grades was similarly arranged in other rooms.

The High School work differed only in the treatment, the general plan, construction, representation, and decoration, being the same as in the schools of lower grade. About 80 per cent. of the work in this school was original. The exhibit of this school also showed, in the many plain and ornamental objects made, the use of material to produce objects from working or constructive drawing. An interesting and new feature was the application of drawing to wood carving, and to clay modelling from which casts were made.

The work in all grades was such as to reflect credit upon the teacher in charge.

SHOP WORK.

There was no increase in the provision of this character to extend the training to larger numbers. The outfit, however, for the first-year work was made more complete, and lathes were introduced into the two shops for more advanced work. The interest in the work continued lively and the work prescribed by the course was usually well done. Thus far since the introduction of this training into the schools there has been nothing to show deterioration in the ordinary school work.

An extension in manual training was made through the partial fitting up of a shop for working in iron. The appropriation was too inadequate to allow other than a very small beginning. As the school year was quite far advanced before the preparation for instruction was sufficiently complete to allow it to begin, it was necessarily restricted to the first steps of the prescribed course.

The number of pupils that received instruction in these shops was 485.

INSTRUCTION IN SEWING.

Sewing in a systematized form was introduced into these schools in January, 1888. Its introduction was permissible through the free provision of a teacher by the trustees of the Miner fund. Owing to the very limited provision, but a few classes could be formed, and for the economy of time, they were restricted to several school buildings in the same section of the city.

At the beginning of the last school year public school provision was made by the employment of two teachers, who were well skilled in a knowledge of the art and who had been trained during the previous year as to the best methods of imparting it to pupils in the public schools. One was assigned to each division. Classes ranging from thirty to fifty and embracing all girls in the fourth, fifth, and sixth grade schools, were formed, and instruction varying from sixty to ninety minutes, as determined by the grade, was given weekly to each class. This very

limited teaching force in so wide a field necessarily imposed, in the large classes, much labor upon the teachers, and reduced all opportunity for individual instruction to the minimum. The instruction was confined to plain sewing.

The number of pieces made, which consisted of aprons, skirts, bags, pillow cases, infant dresses, night-gowns, dust caps, handkerchiefs, and articles of underwear, was 5,608 There were also 4,167 button-holes worked.

A fair idea of the interest taken by the pupils in this work, and the sympathetic support given by the regular to the special teacher in her labors, may be obtained from the following extract taken from the report of the teacher in charge of sewing in the seventh division, submitted to this office in June :

I have been well supported in my work by the teachers, and the interest shown in this branch of industrial work by the pupils has been more than gratifying. Even the boys, of whom about forty have been instructed by me in sewing, show nearly as much desire to attend the classes as the girls. The ease with which I have been able to interest the children of the fourth, fifth, and sixth grades in this kind of instruction encourages me to believe that sewing could be most successfully begun in the third grade, and that it might be continued with much profit in the grades above the sixth.

The number of girls receiving instruction in sewing was about 1,534. At the industrial exhibition of the schools of these divisions held near the close of the school year, the exhibit of this department in the extent, variety and quality of its work, was a most prominent feature, and had in it much to commend the faithfulness, energy, and efficiency of the teachers.

So far as this instruction has been introduced into the schools the testimony of the regular teachers is favorable to its healthful influences, considered either in its relations to discipline or to scholastic work. On whatever side viewed—whether on the physical, in which there is recreation in the change from strictly intellectual pursuit; on the intellectual, in which opportunity is given for enlargement of the scope of knowledge; on the moral, from which comes training to habits of order and neatness; or on the utilitarian, in which is seen one of the most practical and universal needs of man—there is most to recommend this branch of instruction.

INSTRUCTION IN COOKING.

There were two schools of cookery, one in each division. As these were not organized until January, 1888, several months after the school year had begun, the last year was the first in which continuous instruction was permitted from the beginning of the school year to its close.

The instruction was limited to girls of the seventh and eighth grade schools and those of the High School, and was readily accepted to the extent provision was offered. Fifteen classes were formed for each school, and each class received instruction two hours weekly. In ad-

dition to 476 girls thus provided for, about 100 were recipients of free instruction at Mrs. A. L. Woodbury's private school of cookery, making an aggregate of nearly 600 girls in the enjoyment of instruction of this character.

This instruction, which so closely allies the school to the home, presents training of the most practical character and gives knowledge both useful and beneficial. Among no others as a class, perhaps, can be found greater wastefulness in food preparation. The reasons are obvious in the unfavorable conditions of the past. The value of this training in its promise of economic conditions favorable to the promotion of material interest can not be overestimated.

No intelligent person will question that in its bearing upon health, physical, moral, and intellectual, the wholesome preparation of food is clearly in the direction of the welfare of mankind, and that therefore it is of much consequence to learn to recognize wholesome food, to know the elements of its composition, and to understand its physiological effects.

Acceptance of industrial instruction has been left wholly to the choice of the pupil. The degree of embrace has been so universal that but little opportunity has been allowed for thought of enforcement. It is recognized that in this, as in every other department of instruction, success is made to depend very largely upon the skill and experience of the teacher; and that these requisites must be accompanied by those inspiriting forces, earnestness, and enthusiasm, that the value placed upon it by the teacher may find due measure and recognition in its reflex from the pupil.

Another very important factor is the spirit or disposition of the regular teacher toward it. The potentialty of her influence over the pupil, gained by precept and example from almost daily contact in the schoolroom, is great. The degree of cheerful volition manifested by the pupil in his acceptance of it, will, as a rule, indicate the degree of her sympathy with the instruction, and *vice versa*. At present apathy is the rare exception.

In a few instances, however, parents have objected to their children receiving this instruction. When these objections have arisen from some misconception of the character and object of the instruction, the "turning on light" has removed them; but in those in which there is insistence that school instruction shall be continued on, and restricted to the immemorially traveled lines, removal seems hopeless.

The time spent in the shop, cooking-school, or sewing class has thus far proved beneficial, inasmuch as it has conferred a knowledge of its kind and stimulated to greater effort in what has been considered the legitimate studies of the school-room.

This instruction is valuable in the enlargement of the scope of knowledge through encouragement to fuller study of, and closer acquaintance with, the materials with which it deals; in the mental development that

follows from the training of the hand and eye, and in furnishing a practical knowledge of much engagement in life that must sooner or later claim attention from all.

In its physical aspect it contributes to more harmonious development in changing the bent of public school instruction from the almost purely intellectual that has constituted its main, if not sole, feature in the past.

Considered subjectively or objectively, there is in it much to commend, and also to recommend, the further extension of the benefits of which it is capable.

KINDERGARTENS.

The seventh and eighth divisions present a wide field for the kindergarten. In any act for its establishment its benefits should be made to extend to all of proper age to receive them. In such extension the present school law, which restricts the minimum age for admission to six years, presents an obstacle. It should be so amended as to make the minimum five or four years. Such a change would add to the school population of these divisions, in the adoption of the former as the minimum age, not less than 1,500, and in the adoption of the latter not less than 3,000. In its turn, to meet the wants, this addition to the school population would require increased provision both in accommodation and teaching force, with consequently greater expenditures for public school instruction.

The benefits to be derived would be in the gain of general school efficiency; in the extension of school privileges to a greater number of children, and in greater acquisition and better preparation for life to many who, on account of adverse circumstances, are compelled to withdraw from school at an early age.

With constant recognition of the fact that it is dealing with undeveloped and untrained power, the kindergarten presents greater possibilities through the spontaneous activity of child-life for harmonious training and development. In being made the link in instruction between the home and the primary school it may be made to supplement and perfect the work of the former, and, as the principles underlying it form the bases for all true education, not only the work of the primary school but that of the successive steps in a system of public schools will be more efficient in results.

Its benefits may extend to the home of the cultivated, whose pursuits in life may intervene to prevent that systematic training of the child which makes him capable of most in life; to the home of the poor, whose struggle for the sustenance of life absorbs time and energy; to the home of the illiterate, whose absence of qualifications is due to the want of opportunity. In its earliest embrace of the training of the child it may, through its influence and power for the development of character, save hundreds in the most plastic period of life, both at the unfortunate home and in the street, from susceptibilities to vice and crime, to which they are constantly exposed.

The establishment of kindergartens would require the training of kindergartners for them. At least until experience should suggest otherwise, a department could be created in the Normal School. This is also favored by the fact that the training of the kindergartner in her grounding in pedagogic principles and methods runs parallel with that of the teacher of the primary school, and further by the fact that the present large introduction of kindergarten methods in the primary school would suggest greater efficiency to the primary teacher through the study of those methods. A knowledge of these would also facilitate the transfer from the kindergarten to the primary school.

HIGH SCHOOL.

The whole number of pupils enrolled in this school was 416, of whom the comparatively large number of 163 were received from the six eighth-grade schools. Of the entire enrollment 81 were boys and 335 were girls.

The following table gives the whole number of pupils enrolled in this school from 1880-'81 to 1888-'89, inclusive, as boys and girls, and the per cent. of each sex in the enrollment:

Years.	Whole number of pupils enrolled.			Per cent. of number of pupils enrolled.	
	Boys.	Girls.	Total.	Boys.	Girls.
1880-'81	14	61	75	18.7	81.3
1881-'82	8	82	90	8.9	91.1
1882-'83	9	105	114	7.9	92.1
1883-'84	17	110	127	13.4	86.6
1884-'85	22	150	172	12.8	87.2
1885-'86	37	210	247	14.9	85.1
1886-'87	51	225	276	18.5	81.5
1887-'88	73	288	361	20.2	79.8
1888-'89	81	335	416	19.5	80.5

The ratio between the sexes last year varied but little from that of previous years.

The average number of pupils enrolled was 334 and the average number in daily attendance 311. The per cent. of attendance based on the average enrollment was 92.9. This does not indicate so good degree of regularity in attendance as that noted in the elementary schools. It may be due to the present remote location, but from whatever cause it is due, it is not favorable to proper acquisition and to thoroughness in scholarship.

The promotion of pupils from the first to the second year, and from the second to the third year, was not as large as in the preceding school year. The graduating class numbered 67, and was the largest in the history of the school.

Exclusive of the special teachers in drawing and music, a portion of

whose time only was given to this school, there were 11 teachers employed, or 2 more than in the previous school year.

The commencement exercises were held jointly with those of the Normal School, June 18, 1889. The address to the class was delivered by the Rev. F. J. Grimke. The diplomas were conferred with appropriate remarks by Hon. J. W. Douglass, president of the Board of Commissioners of the District of Columbia.

The following were graduated from the school:

Mary E. Adams, Mary A. Allen, Josephine Ashton, Emma F. Blackwell, Ida M. Brown, Sarah W. Brown, Annie E. Budd, Mary A. B. Contee, Ida Countee, Maggie E. Crusor, Lydia A. Dickerson, Olive R. Freeman, Harrietta George, Annie E. Gillem, Pauline E. Hawkins, Laura E. Hill, Dora B. Hopson, Sarah E. Jenkins, Leonora Joice, Clara G. Jones, Mary Jones, Martha Lee, Estelle G. Lewis, Eleanora B. May, Sarah E. Miner, Sarah J. Neal, Helen S. Parker, Frances E. Payne, Ella E. Perry, Martha A. Peyton, Julia L. Pierce, Mary F. Quander, Emma V. Russell, Catherine I. Sewell, Annie F. Smith, Maud I. Smith, Sarah E. Smoot, Serena Spencer, Mary E. Ware, Mathiel Williams, Francis L. Cardozo, jr., James M. Fraction, George D. Johnson, Harry Lewis, Moses G. Lucas, Henry A. Smith, John M. Syphax, William L. Tignor, John H. Turner, Richard E. Younger. *Business course:* George T. Beason, John H. Bell, Charles E. Blair, Charles H. S. Browne, Harry A. Clarke, William H. Cowan, Byron S. Fischer, Richard C. Jones, Elijah C. Robinson, George W. Scott, Ralph B. Stewart, George W. Timus, Walker B. Webb, Robert L. B. Wilkinson, Frank P. Wilson, Elizabeth Woodford, John H. P. Young.

During the last session of Congress an appropriation was made for a high-school building and a site on which to locate it. In the selection of the site two difficulties were presented, neither of which could be considered independently of the other: unoccupied space sufficient in area for the purpose, in a locality offering a fair degree of accessibility to the entire colored school population of Washington and Georgetown, and ground at a cost reasonable and not exceeding proportionally that paid for sites on which to erect buildings for elementary schools. The solution of the difficulties was to extent practicable realized in the site selected on M street, near the crossing of New York and New Jersey avenues. In the choice of this site its environments were not without influence. It is prominently and healthfully located, having in its front a broad unobstructed view in the width of M street and New York avenue, with an intervening triangular reservation. The appropriation made for this school is, however, not sufficient to meet its wants as to accommodation. The site, necessarily larger than that required for the ordinary eight-room building, has been purchased. An increased appropriation is necessary to permit the construction of a building suitable to the purposes of a school of this character.

Your attention is called to the following report of the principal of the High School:

DEAR SIR: I have the honor to submit herewith my annual report for the year ending June 30, 1889.

The whole number of pupils enrolled in this school during the year was 416. Of this number 40 were transferred to the Normal School on the first day, leaving 376 as

members of the High School. The average number enrolled was 334, and the average number in daily attendance was 311. The increase over the preceding year in the entire enrollment was 55; in the average enrollment 47, and in the average attendance 44. The average percentage of attendance was 92.9. There were 11 teachers, including the principal.

BUILDING AND ACCOMMODATION.

This building, the Miner School, is entirely unsuited for a high school, and we look forward with pleasure to the completion of the new building for which Congress has made an appropriation. We hope the fund will be large enough to give us a building with the modern conveniences suitable to a high school, and if not that Congress will make an additional appropriation at the next session.

INSTRUCTION.

There are two courses of study pursued in this school, an academic course and a business course; the former requiring three years for its completion and the latter two. No pupils have applied for the scientific course.

We shall state the nature and extent of the work performed in each of the subjects in these respective courses.

ACADEMIC COURSE.

English.—This subject is studied during the entire three years of the course, dividing the second year with history.

In the first-year classes the pupils used Chittenden's Composition as a text-book, supplemented by reading authors from the classic series.

The second-year classes studied English during the third and fourth quarters, having studied history during the first and second quarters. They had a brief historical review of American literature during the colonial and revolutionary periods, and have read selections from a few prominent authors, among which are Irving and Longfellow.

In the third year the pupils during the first two quarters studied American literature, reading selections from the works of such authors as Irving, Longfellow, Whittier, Bryant, and others. In the last two quarters they began the study of English literature, with a brief and very general review of its history down to and including the sixteenth century, reading one play of Shakespeare, the Merchant of Venice, and Bacon's Essays.

The third-year classes will be able to accomplish a greater amount of work in English hereafter, as this subject divided the year just closed with history, which previously occupied the whole of the first and second years.

In addition to this, essays were required from time to time on the life and times of the various authors.

Latin.—In the study of Latin the object to be attained in the first year has been to have each pupil secure as large a vocabulary as possible, to know the structure of Latin moods, and to understand the idiom of the language. To accomplish this more attention has been given to the grammar and Latin composition than to translation merely. The class has completed Leighton's Latin Lessons and made a fair beginning in Cæsar.

The condition and progress of the Latin classes of the second year and third year mark a growing interest in the study of the language. The pupils in many cases have done the prescribed work with so much zeal that the language seems to be studied by them for itself, and not merely because it must be taken by them in the academic course.

The second-year classes read three books of Cæsar and four hundred lines of Virgil's Æneid. The third-year class read three books of Virgil and two orations of

Cicero. All of this work has been interspersed with weekly exercises in Latin composition.

Mathematics.—The work in algebra has been as satisfactory as could be desired. We find that the pupils who come up from the eighth grade are in different stages of advancement; those who spent two years in the eighth grade more advanced than those who have spent one. The result is that the teachers of that subject have to spend a large part of the first quarter in reviewing and endeavoring to equalize the pupils, so as to obtain a proper basis for the advancement of all.

It is then almost impossible for a large number of the pupils to cover the ground prescribed in the course and be thorough. The result is that more pupils fail to pass from the first to the second year on account of their deficiency in this subject than in any other.

As a remedy for this evil I would respectfully suggest that the course in this subject in this school be somewhat shortened, and that the pupils do not begin algebra until they come to the High School, devoting the time in the eighth grade hitherto given to algebra to arithmetic and English, which, from our experience with them in those studies here, they could do with profit.

The work in geometry has been more satisfactory. This subject has hitherto been confined to pupils of the second year. They have covered the ground usually comprised under plain geometry, with several selected propositions in solid geometry. In the study of this subject it is found necessary to uproot the idea that geometry is a set of propositions and proofs to be committed to memory. As a means to this end much time has been devoted to original work within the range of the pupil's ability, yet requiring independent thought, such as easy logical transitions from principles formulated in the text book, practical applications of theorems, and original demonstrations of exercises.

During the next year if sufficient pupils of the third year elect to pursue this subject further, a class will be formed for the completion of solid geometry and trigonometry.

History.—This subject is studied the whole of the first year and one-half of the second.

In the first year the history of Egypt, Greece, and Rome is taught, and in the second year the history of England.

It is our aim to show how past events give life and color to the active pursuits of to-day. The lesson is assigned by topics, and questions given for personal investigation. Books are suggested as helps, and in this way the pupil is taught where and how to find what he does not know. The result of this investigation is a general discussion in class and an arrangement of the collected material in logical order.

Close attention is given to the geography of the country. The map, with sections of the country drawn on the blackboard, is used daily. The leading characters of Greece are assigned to each member of the class at the commencement of the school year. At the end of each quarter the result of the investigation is given to the class in the form of historical papers.

In Roman history the paper gives way to a topical outline arranged on the blackboard, and the pupil lectures or talks from this outline. This exercise is of great value, as it teaches the pupil confidence in expression.

Physics.—The course pursued in this subject is that laid down in the text-book used in the class, Gage's.

The class-room and laboratory are the same. This is inconvenient to both teacher and pupil; when they are separate the work can be pursued with greater advantage. The various subjects taught are illustrated by experiments performed by the teacher before the class, and afterwards performed in the laboratory by the pupils. The pupils are also required to make instruments illustrative of the different subjects taught, and they have attained a good degree of proficiency when we consider the disadvantages mentioned above under which they labor. Special attention has been

given to the subject of telegraphy, and the pupils have attained a remarkable degree of proficiency.

It is hoped that a specified sum will be appropriated hereafter for the benefit of this department sufficiently large to purchase all the apparatus and material necessary to equip it thoroughly for the important work to be performed.

German.—This subject is taught in the third year of the academic course; the pupils studying Stern's "Studien und Plaudereien." The natural method is employed in teaching and as much of the intercourse as possible between the teacher and pupils is carried on in German. The grammar is also studied systematically and writing German composition is practiced.

Political economy.—The pupils of the third year in the academic course have studied this subject. It was taught them by a course of lectures, of which the pupils took notes. They were then subjected to oral and written examinations. The pupils evinced a great deal of interest in the subject, and showed by their examinations that they understood and profited by it.

Business course.—There were 18 pupils in the first year of the course, and 24 in the second. The pupils of the first year in the academic course, with the exception of Latin, for which business arithmetic and book-keeping (single entry) were substituted.

The pupils of the second year in this course studied the same subjects as those of the second year in the academic course, with the exception of Latin and Geometry, for which business arithmetic, book-keeping (double entry), and commercial law were substituted. The pupils of this course were practiced in drawing up business forms and papers.

I would suggest that the subject of stenography and type writing be added to this course, especially the former. They are now taught in most institutions that give a business course. The subject of stenography can be taught in one school year of nine months.

Drawing.—The drawing classes consist of regular and special classes. The regular classes comprise all the pupils of the school, and the special classes those selected by the teacher of drawing on account of special fitness for this work.

The regular classes have been taught to apply the principles in which they have been instructed by making geometrical figures from card-board. The special classes have given their attention to modelling in clay, plaster of Paris, wood-carving, and free-hand and mechanical drawing.

The results of their labors were seen in the exhibition held at the close of the school. The exhibits of the High School in the hall elicited praise from all the visitors.

Vocal music.—The study and practice of vocal music is elective, and it is to be regretted that a comparatively few of the pupils of the second and third years have chosen to cultivate it. A large number of the pupils of the first year attend the instruction of the director of music and have profited thereby.

Manual training.—The boys in the school who desire to join the classes in manual training were given an opportunity to do so. About 30 attended the carpenter shop and 12 the class in metal work, once a week.

I would suggest that the atendance at these classes in industrial training be made compulsory hereafter, and instead of one hour a week being devoted to them three hours a week should be given to them out of the twenty-five hours a week spent in school by the pupils.

This important subject is now occupying the attention of educators in all countries. To show its value I shall quote a part of an editorial in the Washington Daily Post of June 23, 1889:

"Among the revelations of the Paris Exposition is one which will surprise most Americans. It is comparatively circumscribed character of American education. Many will regard it as a curious fact that in exhibits showing the methods and results of school work England and America are far in the rear of France, and even of Japan.

"This is because England and America have longest adhered to the idea of a literary training as the sole purpose of school training. Taking the country at large this is the idea of education which still prevails in the vast majority of American schools. The English language and literature, and, if possible, the classical languages and literatures—these have constituted and in the main still constitute the American ideal of an education.

"Now, in France, Germany, and other countries, the idea of an exclusively literary education has become obsolete, because it was found to be partial, one sided, and wholly insufficient. In those countries growth in literary knowledge is accompanied and complemented, stage after stage, by a similar growth in industrial training, and the valuable results which this exposition makes manifest bear ample testimony to the superiority of that method.

"France is easily first, both as to the extent and quality of her educational exhibit. Here all the world learn what schools can do for inventive, decorative, and constructive industry. It shows how every step of mind-training is constantly accompanied by the training of the eye and the hand throughout all the sciences and arts, and it explains quite easily how France has gained her pre-eminence in fine industrial arts, and her monopoly of those profitable products which depend on the skill and genius of the designer.

"Belgium, Holland, Switzerland come next in order, followed by the French colonies and other countries. Nothing is viewed with greater surprise than the Japanese school exhibit. It is excellent in character, and in systematic arrangement is equal to that of France. The kindergarten system of Japan is most successful, and it has enrolled about three million children.

"Indeed, every grade of literary and industrial school work shows marvelous progress, and not the least interesting feature is that part of the exhibit which shows the skill of deaf-mutes in wood carving, painting, modelling in clay, and in designing for textiles and ceramics.

"Now, the comparative backward condition of American education in these respects is not only a disappointment, but it is also an indication of a great national loss. More children in proportion to the population go to school in the United States than in any other country, and more money is spent on education here than elsewhere. Nevertheless these children learn less that is of practical value than children anywhere else. The early and continuous training of eye and hand, the fullest practical instruction in the arts, is not only a requisite of a comprehensive and progressive education, but it is necessary to the true and full development of American industry."

Military drill.—The boys of the school were formed into a company for drill in the manual of arms and foot movements under an experienced teacher. Through the kindness of the officers in charge, they were allowed the use of the hall of the Washington Cadet Armory and the guise belonging to the cadets.

This exercise is an excellent means of physical development, and it is to be regretted that there are no conveniences in our present building for its practice. This difficulty will doubtless be overcome in the construction of our new building. I would suggest that military drill be then made compulsory, and that efforts be made to obtain guns for the company.

Cooking.—Some of the female pupils of the second and third year classes attended the cooking school, and profited greatly therefrom. The same argument in favor of the boys giving more time to industrial training is applicable to the girls in their attention to this art, and that of sewing. I regret that sewing is not taught at all in this school. I would recommend that the higher branches of this art (cutting and fitting) be taught to the pupils of this school hereafter.

Library.—The library in this school consists of about 750 volumes. It was founded by gifts from the friends of the school, and increased by the proceeds of concerts. It is utterly inadequate, and I would earnestly ask for a special appropriation of $500

a year to purchase books of reference. The importance of a good library can not be overestimated.

One of our teachers, Miss M. A. Lawton, died June 2, 1889. Although she was only assigned to the high school in September, 1888, she had endeared herself to the pupils and teachers, and her loss was deeply deplored. She was a faithful and conscientious teacher.

The superintendent and teachers have heartily co-operated with me in the management of the school, and I wish to acknowledge my obligations to them for their valuable assistance and suggestions.

Very respectfully,

F. L. CARDOZO,
Principal.

Mr. G. F. T. COOK,
Superintendent of Public Schools.

NORMAL SCHOOL.

The whole number enrolled in this school was 40, of whom 37 were female and 3 male.

From the establishment of this school to the school year 1887–'88 the number of admissions to it annually was limited to the probable needs of the colored public schools of the District during the next school year, and its graduates were preferred in appointment to positions. In this respect it harmonized with the other public normal school, and accorded with an opinion that had seemed to prevail that an aim in its establishment was to supply local needs exclusively. This aim was fostered by economy in the husbanding of pecuniary means to meet in other directions largely existing and pressing educational needs.

In the school year 1887–'88 the number limit in the annual admission was changed from 20 to 40, the same as in the other normal school, whose field for supply was twice as large, and subsequently there was further change, by which the obligation to prefer in appointment was removed after the first 20 had been appointed.

Before this change, with one exception every one that had been graduated from this school and that desired appointment had been appointed; and, as had been done in previous years, the one excepted, but for the change, would most probably have been employed a year later.

Subsequent experience has shown that the change has resulted in what was anticipated, undue competition for place with consequent feeling. As by the rule preferred appointments are limited to twenty, and to the year next succeeding that of graduation, the hope of appointment in any other year recedes farther and farther in the annual graduation of a number largely in excess of positions to be filled.

Not only has it resulted in feeling, which grows and intensifies as each succeeding class contributes its large quota to the number who have already qualified themselves for places, but, in the preparation for position, there is, in the struggle for first place, or place reasonably safe within the line of preferred appointment, too great strain for the

best conditions, physical, intellectual, or moral. It is true that competition more or less exists in the conditions for admission to this school, but as the completion of the high-school course is one of the terminal and largely objective points in the public-school system, disappointment from being out-distanced is not so great.

A limit in the number of the admissions to the probable needs of the schools will, in my opinion, afford less cause for present feeling and, in the removal of present nervous strain, will give greater general efficiency to those who pass from this school to the teacherships of the schools.

Successful teaching is based upon correct principles. In the earlier years of these schools the knowledge of underlying principles was most largely gained through long experience, and experience, more or less, at the expense of the child. By the establishment of the normal school, these principles are imparted and the actual practice in the application to real work. Loss or injury in the attainment has been reduced to the minimum.

The work done in this school is, generally, good. In the admission each year there is seen better material both in maturity and capacity. The reflex of its work through the large force that it has sent out into the teacherships is becoming more and more visible.

The commencement exercises were held June 18, 1889. The following is a list of the names of the graduates:

Laura G. Arnold, Nancy M. Atwood, Anna D. Bell, Bertie S. Brooks, Anna T. Brown, Maria E. Buckner, Carrie M. Crouch, Mary R. V. Dickerson, Sarah J. Dickerson, Ellen H. Dockett, Susie E. Dyson, Mary F. Geary, Ella Green, Sarah Hall, Sara E. Jackson, Anna E. Johnson, Maria A. Madry, Rebecca L. Moten, Lucy J. Moten, Mary V. Morton, Mary M. Orme, Louise E. Pierre, Carrie Pierre, Florence O. Patterson, Rebecca B. Pierson, Lucinda G. Shorter, Mary R. Toy, Alice J. Tyler, Jane M. Taylor, S. Estelle Tucker, Martha J. Thomas, Emma L. Vaughan, Mary B. Washington, Mary A. West, Kate L. Wayman, Lydia C. Wilder, Mary M. Wright, Francis D. Smith, John E. Syphax, James E. Young.

Your attention is respectfully called to the following report submitted to this office by the principal:

DEAR SIR: In compliance with your request I have the honor to submit the following as a report of the condition and needs of this school. "There is no office in this world of greater importance than that of a teacher of youth; for there is nothing on earth so precious as the mind, the soul, and the character of a child."

It is the specific work of this school to train teachers for the common schools of the District of Columbia. Here, if anywhere, is the greatest need for care and frankness. It should be like a true mirror to each pupil, reflecting not what ought to be, but what actually is, giving to each as nearly as possible the power to see herself as others, competent to judge, see her.

The qualified teacher is the indispensable element and central power in all systems of teaching. To know how to read and write and spell, with ease and accuracy, repeat the rules of grammar or give the syntax of sentences correctly, and to solve the problems in arithmetic according to rules, form but a part of the efficiency of a competent teacher.

Knowledge is power only when it is thoroughly comprehended in its true relation and can be used with ease and facility. To be a teacher, then, implies a knowledge

of principles together with the ability to explain forcibly and clearly the *why* and *wherefore* to others.

Knowing and teaching, acquiring and imparting, are very different matters, and consequently many excellent scholars fail as teachers. It should ever be borne in mind by the teacher that rules are mere deductions, and this fact should always guide her in the use of them—the *how* and the *why* giving the only reliable knowledge.

"Learn to do by doing" is the true principle underlying all teaching. The child's mind must be brought, by conscious personal effort, in contact with the subject to be learned. The go-between is the successful teacher. If she be not full to overflowing with the subject, she can not throw into the dull, lifeless words of the text-books that magic power which is necessary to constitute the mind of the learner its own instructor. If the teacher do the thinking and observing for her pupil, the disciplinary purposes are in a great measure defeated.

Knowledge of the subjects taught, broad and deep; knowledge of the best methods of instruction, deduced from a knowledge of the mind and its power of acting, are two essential qualifications of the competent teacher, the value of which must not be underrated; but there is still another, which should rank first, for without it all scientific attainments are unsanctified—an unquestionable moral character; not a mere absence of striking moral blemishes—a negative sort of virtue—but a positive character, capable of stamping its individuality. The teacher by her example *does teach*, for good or for evil, whether she will or not.

The exigencies of the times demand that the teacher be positively moral as well as intellectual. She is a "living epistle, known and read of all." Her influence penetrates to the acts, purposes, and results of future years. "The child is father of the man." Unrefined manners, uncouth expressions, undignified and trifling conduct, or untidy and negligent habits can not be compensated for by knowledge of the sciences and arts, and the school-room is no place for such a character.

"In human intercourse every element of character is an educator." Sad, but true, very many of our children have not the refining influence of discipline at home. Their families possess neither the virtue of a high standard of morality nor the softer amenities of that true refinement which takes its source in culture, hence they must grow up deficient in these essentials of a desirable character unless remedied by the example and teaching of the school-room.

Let the teacher full of energy and enthusiasm, with a pure soul and elevated mind, and a refined manner, enter into this work, conscious of its great responsibility, with all her zeal, determined to counteract the evil influences on the outside, and appreciate her position for the grand opportunity it affords in preparing the young to become good and useful men and women.

In order to awaken an interest in the importance of good behavior and refined manners as a necessary equipment for the true teacher, a series of talks upon this subject has been given weekly, affording an opportunity to the pupils to ask questions regarding manners and deportment at home, in the street, and in refined society. They have proven not only interesting, but decidedly valuable and instructive, the effect upon the carriage and conversation being particularly noticeable. The more understandingly and sympathizingly a teacher enters into all the pursuits and pleasures of her scholars, the more easy and effectual will the discipline of her school become.

The past year has been one of the most pleasant and satisfactory since my connection with the school. Teachers and pupils have co-operated most enthusiastically in every project of advancement.

The attendance has been very good, absences in every case being caused by personal illness or some other unavoidable reason. We started with thirty-seven females and three males, all of whom were graduated. In scholarship the average was much above that of the preceding year. All have done well; by this I do not wish to be understood as intimating that all will be found equally qualified for

teaching. Diversity in native talent, temperament, application and physical health must affect the result of any course of instruction in the different individuals.

True fitness for teaching consists first of all in a thorough as well as liberal scholarship. It can not, practically, be expected that the common schools and high school should ever afford that thorough elementary drill which is so essential for professional training, hence the necessity for something in this line to be done by the Normal School. With the limited time at our disposal it is almost an impossibility to give that attention to this drill which our pupils so sadly need, and yet do successfully the specific work of professional training. I therefore most earnestly recommend to your careful consideration either the lengthening the course in the Normal School to two years, the time allowed in the best normal schools, or a modification in the third year of the high-school course, for those who intend to enter the Normal School. I feel confident that the moral and intellectual standard of our graduates would be greatly raised, and their influence in the community correspondingly broadened.

Those who are beginning the study of education need to be inspired with the lofty and responsible position of a teacher. They must be made acquainted with the best methods of organizing, governing, and instructing a school. A genine enthusiasm for the work must be awakened. They must know how to interpret the lessons of daily experience by constant reference to the principles that underlie the science of education, and thus grow into higher and higher degrees of competence; and finally they must be given breadth of view and be allowed to take full advantage of the recorded experiences and experiments of the long line of an illustrious professional ancestry.

Lectures are given by the principal three hours per week on right views of education and correct methods of instruction and government; two hours per week on the philosophy of method as applied in all of the practical work; two hours per week in the history of education. Thus they pursue the subject of education in its three main phases, the practical, the scientific, and the historical. Constant reference by both teacher and pupils is had to Baine, Fitch, Tate, Sully, Porter, Hamilton, Herbert Spencer, Currie, Wickersham, Parker, Calkins, Brooks, Swett, Kellogg, and Page.

No theory as to method of instruction is advanced which is not immediately illustrated with a group of children from some one of the training schools. In the criticism of the lesson great attention is given to the philosophy of the method pursued. The teacher by judicious questioning leads the pupil-teachers to deduce certain laws or suggestions, after which an immediate reference is had to some one of the above-mentioned books for confirmation and study. I find this method of studying psychology to be decidedly more practical than the lecture or topic method.

PRACTICE.

We have used three first, two second and one third grade as schools for practice.

The opening day of school the pupil-teachers are divided into six groups and sent into the schools to observe the organization by the regular teacher and continue for two weeks, each day reporting observation to the teacher in charge. At the beginning of the third week two pupils are designated to take entire charge of each practice school for three consecutive weeks. The most apt one as principal the other as assistant. The teachers proper now become training teachers and are expected to guide and direct the pupil-teachers in methods. The pupil-teacher is at all times encouraged to question. We aim to train, to think, to reason, and to develop plans for their work. Each pupil-teacher in turn becomes principal. The work is carried on in these schools every day from September to March, which allows each pupil-teacher not less than three consecutive weeks' practice.

Special attention is given to the preparation of lessons. Each plan is submitted to the training teacher and is rigidly criticised as to matter, arrangement, orthography, and syntax; mistakes noted, paper handed back for correction, and must always be

open for inspection by the principal. This close scrutiny has a tendency to make the pupil-teacher thoughtful and careful.

March and April from 8.45 a. m. until 12.30, through interest in and courtesy of former graduates and kindness of our superintendent we are allowed a choice of twenty first-grade schools for practice. Two pupil-teachers are given entire charge of each school. The regular teacher acts as training teacher, who suggests and criticizes and gives to the principal a correct and faithful report of each pupil-teacher.

At 1.30 we assemble in normal room to listen to reports and criticisms.

During this period of outdoor work the principal, with her first assistant, makes daily visits to the various buildings and supervises the work. It is truly beautiful to observe the gradual development of power to instruct and control as well the formation of a higher ideal. This work also gives a greater aptitude to imparting and disciplining. There is also a gradual opening of a new world of thought-action. They gain an ease in adaptedness to the needs of younger scholars. It gives them a taste of actuality.

LITERARY SOCIETY.

"Not to know what the better spirits of the world have written and not to have gained some appreciation of their master pieces, is to have missed one of the prime conditions of high teaching power." No matter what a teacher's advantages for professional training, she should ever feel herself obligated to read and to study for self-improvement. "Education is a matter of life, activity, and growth." Carlyle says: How shall he give kindling in whose inward man there is no live coal, but all is burnt out to a grammatical cinder? In order to stimulate the pupils to this higher desire for self-culture, we organized during this year the Home Culture Clubs, as suggested by Cable.

Excellent work was done and at least the foundation is laid for future self-culture, thereby gradually developing a higher life within themselves and exerting an important and constantly widening influence in favor of good learning.

SAVINGS-BANK.

The true value of money is a subject upon which the young are not likely to deliberate. Shiftlessness seems almost a quality inherent. Experience and observation have shown me the great need of economy being formed as a habit in our children. After thinking over the seriousness as well as the importance of the subject, we concluded to introduce the school savings-bank as an experiment. The amount of interest has far exceeded our most sanguine expectations. The pupils entered into it with all the zest common to youth, when novelty is the inspirer, but what at first was prompted by curiosity gradually grew into a habit. From December, the date of the inauguration, to June over $70 was deposited, and this, too, without any special effort, representing only the pennies and nickels that would ordinarily have been spent at noon. Think how much better that this amount should have been saved, as well as the far greater result—a habit formed. Think, too, that this represents only forty pupils. Then reflect upon the thousands of children who daily spend from 1 to 5 cents at noon that might be saved. Would it not be advisable in the light of these facts for the teachers to use their influence to establish these banks? It is perfectly practical and entails very little extra work upon the teacher. There is no limit to the amount of good that may come from its influence. Of the amount deposited $42 have been paid for piano hire; $5 for lectures, and $5 for charity, and to each graduate a small account to his credit in the Capital Savings Bank. I am fully convinced that many will use it as a nucleus for this year's savings.

A matter of very pressing need to the Normal School is a piano. Our pupils are taxed 10 cents per month to hire one and at times this is burdensome upon poor pupils. We also need a larger number and greater variety of reference books.

Many of our children have not the benign influence of educated parentage as those more fortunate, consequently increased attention and care are absolutely necessary on the part of the teacher to give that home training which must form the foundation of formal study. I would therefore recommend that the next teacher appointed as an assistant have a kindergarten qualification, so that she may teach the principles to the training class and illustrate them by a kindergarten school in the building. I am fully persuaded that the time is rapidly approaching when the kindergarten will be an essential basis of the common school system of this country.

I would again call your attention to the grave necessity for a reduction in the number admitted to this school. The demand does not equal the supply, and as a result great dissatisfaction is and must continue to exist so long as this state of affairs exists.

Our young girls are peculiarly situated. They have no avenue open to them in this city by which a livelihood can be obtained outside of the school-room and menial positions. They are or course, and righteously too, ambitious, and consequently choose the profession of teaching too frequently without due regard to its importance. They are much disappointed when they find that the year's training in the Normal School does not secure them positions and allow their passion to run away with their judgment. This state of affairs is not conducive to the moral elevation of either pupils or school. In view of these facts, I trust you may reduce the class to its original number, twenty, fifteen females and five males. You will not only find greater satisfaction among graduates, but the scholarship of those entering will be higher, as the choice of twenty out of forty or forty-five applicants must give better material.

I urge upon you to act immediately upon this suggestion, so that the fact may be fully established before the close of the school year ending June 30, 1890.

With one other suggestion I shall close this report. As the vacancies or changes occur in the corps of assistants in the Normal School, I pray that they may be filled as nearly as possible by teachers who have some special qualifications, such as kindergarten and elocutionary. I do not mean by the latter one who merely knows and practices the art, but one who has special ability to train others in acquiring distinct and correct articulation, proper deep breathing, and in analyzing thought. The grateful thanks of both teachers and pupils are due to Professor Spencer for having trained the class in penmanship.

With the thanks due you for your ever ready sympathy and entire co-operation, without which we could not have succeeded, I am, sir,

Very respectfully,

LUCY E. MOTEN,
Principal.

Mr. G. F. T. COOK,
Superintendent of Public Schools.

NIGHT SCHOOLS.

Five night schools were opened. They were so located as to furnish reasonably accessible accommodation to large bodies of the population. In the main they were all of primary character; a few of their attendants pursued studies of the grammar-school course.

In the admissions to these schools preference was given to the boys and girls of suitable ages for the day schools, but whose circumstances and employment prevented attendance. Most largely the schools were composed of adults, whose importunity for admission and regularity in attendance not only attested their interest, but seemed to indicate eager embrace of long-delayed opportunity. With a few, though surprisingly few, the motive to admission seemed to lie in idle curiosity or love of mischief; with the many, and particularly so of the adults, the fruitage of earnestness of purpose was large in the results of the work of the term.

It is a noticeable, as well as gratifying feature, that many return to these schools at their re-opening each succeeding year, thereby materially lessening delay in the organization and advancing the grade of school work.

The whole number enrolled was 1080; the average number in evening attendance was 619.

The schools had each 57½ sessions of two hours each, extending from November 12, 1888, to April 10, 1889.

The sessions are entirely too few to insure adequate results. There should not be less than seventy-five or eighty. To permit this extension of the term would require, however, a considerably larger appropriation.

The large field presented by these two divisions for this work may best be seen in the following paragraph taken from my last report:

> The need of this public provision, especially for this class of the population, can hardly be more forcibly presented than by figures from the United States census of 1880. At the time of the taking of that census the number of persons, white and colored, fifteen years of age and upwards, in the District of Columbia unable to write was 24,397, of whom 20,937 were colored. The per cent. of the colored population from fifteen to twenty years of age, both inclusive, unable to write was 22.8, and of that twenty-one years of age and upwards, 59.3, while for the same periods the per cents. of the white population unable to write were respectively 1.4 and 5.4; or, in other words, there are sixteen times as many colored persons of ages from fifteen to twenty-one years unable to write as white persons of same ages unable to write, and eleven times as many colored persons of twenty-one years of age and upwards as white persons of same ages unable to write.

The scope of the character of the work of these schools also could be very materially enlarged, and with most decided benefit, in the introduction of some features of industrial training. In sewing and cooking, the two departments attended with least expense, could be presented instruction of the most practical and useful character, and essentials that would yield large results in the great good they would accomplish.

With the present very limited means, however, it is impossible to extend the usefulness or benefits of these schools in this direction.

The following table gives the entire enrollment, the average nightly attendance, the number of teachers employed, the average number of pupils to the teacher, and the average cost per capita for instruction, both based on the average enrollment:

Schools.	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in attendance.	Percentage of attendance.	Time.		Number of teachers employed.	Cost per night.	Entire cost for teaching.
					Number of nights.	Number of hours.			
Stevens	176	138	126	90.8	57.5	115	4	$8	$460
Garnet	199	111	96	86.6	57.5	115	4	8	460
John F. Cook	252	180	156	86.5	57.5	115	4	8	460
Lincoln	226	144	124	86.1	57.5	115	4	8	460
Randall	227	130	117	90.0	57.5	115	4	8	460
Total	1,080	703	619	.....	.....	.....	20	40	2,300

In the selection of teachers for these schools, it was very wisely provided by Congress that they may be day-school teachers. To this provision is due much of the efficiency that has thus far attended them. The success of the night school, not less than that of the day school, depends very largely upon the skill and experience of the teacher. The greater the degree of these requisites, the greater the products. From the larger inducements, found in the length of service and in the compensation for the same, the day school, as a rule, embraces the greatest skill and experience attainable. In the attainment of the best possible results, these considerations must control largely the selection of day-school teachers for these schools. In such selections, however, there is necessity for the exercise of good judgment, that, in the additional demand upon physical vigor and mental energy, there may not follow detraction from efficient day-school service.

A few extracts taken from the reports of the principals of these schools, submitted to this office, will give a fair idea of the interest taken in them.

The principal of the Stevens Night School says:

On the first evening more applied than could be accommodated. We enrolled one hundred and sixty-five pupils, and had as applicants one hundred and thirty-five. * * * Some of the best moments of my life were spent in that school last year, in looking over the earnest efforts of those whose opportunities have been limited.

The principal of the John F. Cook Night School says:

The school closed with 146 pupils on roll. They expressed much regret that the session was not longer. Seventy-nine and five-tenths per cent. of the entire number enrolled during April were present every session, and I have no doubt that the school might have continued a month longer with a good enrollment. The order was at all times good. The pupils were respectful and showed great willingness to obey the

wishes of the teacher. They were earnest in their efforts to learn, and in some cases showed remarkable improvement.

The principal of the Randall Night School says:

The first thing that impresses me is the number of pupils that entered this year, who last year availed themselves of the opportunity offered by this school. This is an evidence that they appreciate the facilities for learning given by the board and are anxious to acquire knowledge. This class showed marked improvement in all the work over that of last year.

About 45 or 50 of those who entered this year for the first time could neither read nor write, and were as equally deficient in number work. At the close of the session they could read quite acceptably in the First Reader; had made admirable progress in their writing, could handle numbers quite well, even beyond the grade.

EXPENDITURES.

The entire amount appropriated for the support of the public schools of the District of Columbia for the school year ending June 30, 1889, was $631,971. There are no available means for ascertaining exactly how much of this amount was expended for the public colored schools of Washington and Georgetown.

In the earlier years the accounts for the public schools were so kept as to show in detail the expenditures for the white and colored schools separately. On the discontinuance of the practice by the District government, it was, by the board of trustees, made the work of a clerk to the Committee on Ways and Means to keep, in sufficient detail, the expenditures for the separate school divisions. In the subsequent removal of the clerk was also the removal of means available for this purpose. As the teachers' pay-rolls for monthly service are made up at this office, it is possible to show the expenditures for supervision and instruction in these schools during the year. The entire amount expended for said purpose was $130,835. The cost per capita, for supervision and instruction, based on the average enrollment, was $14.39.

ACCOMMODATION.

In my last report I treated somewhat fully of the inadequacy of accommodation, not only as to extent but also as to character. Inconveniences not less aggravated were also experiences of the past year. They were greater in some sections of the city than in others, and notably so in South Washington. In this section, from the want of permanent accommodation and inability to procure temporary, the daily session of many of the schools was lessened one-half to permit the use of one room by two schools. In other sections it was also found necessary, for same reasons, to reduce the session of some of the schools. The number of schools thus affected was 88, and of grades as follows: 40 of first; 31 of second; 11 of third; 3 of fourth; 2 of fifth; 1 of sixth. In the three new buildings now occupied, these necessities and conditions have been very largely removed in the sections in which

they are located, and yet greater relief is promised in the two buildings now in course of erection.

The three new buildings, named Briggs, Jones, and Bell, recently occupied, have each eight school-rooms, well proportioned in dimensions, properly lighted, well ventilated and heated, with cloak-rooms, play-rooms, and other conveniences that present conditions very favorable to the purposes of construction. In the basement of the last-named building there has been from some cause a frequent rise of water and in sufficient quantity to interfere seriously with use. It is to be hoped that some means will be devised to prevent this condition, as its continuance can not be except at the expense of the health of teachers and pupils.

These buildings confer not only physical but mental and moral benefits upon the pupils. Environment is a potential factor in the shaping of character. It tends to make careful or careless, tidy or untidy, refined or unrefined, broad or narrow, and the more intensely the more plastic the period of life. In the location and construction of the school building, then, the prominent considerations should not be solely the physical comfort and health of the occupant, but also the beautiful and the attractive, as a means of culture and the development of correct tastes and habits.

In a sanitary point of view many of the buildings in these divisions do not present conditions of most satisfactory character. There is, in plain words, much need of lime and paint, both internally and externally, and the former should be applied at least once a year. The accretions upon the walls and ceilings of a school-room, from the exhalations of fifty pupils, more or less, for five days in the week and nearly forty weeks in the year, tax, in my opinion, quite severely all due considerations for health. If not in the accumulation of a year, certainly in the accumulations of years, pressing invitation is given to disease, both for its promotion and for its spread. In the consideration of the health of teacher and pupil the sanitary condition of the school-room can not be too zealously promoted and guarded.

The Stevens School building was erected in 1868. Some of the material used in its construction seems not to have been of the best; though, perhaps, it was as good as the means at hand permitted. About three years ago two wings were added to the building, each wing containing three good school-rooms, each with proper cloak-rooms. At the time of their erection no means were available to remedy defects and to make such change in the old structure as to have it fully conform to the new additions. The absence of sufficient light in the school-rooms, the dangerous condition of thinly-worn floors, the obstruction of the original hall-ways by conveniences for the pupils' wraps, and other inconveniences opposing general school efficiency, present very strong reasons for reconstruction. In view of these poor conditions, I would recommend that an appropriation be sought sufficiently large for the purpose.

The most pressing need as to the additional accommodation, as indicated thus far in the current school year and by the average yearly per cent. of increase in the enrollment, is two eight-room buildings—one for the seventh and the other for the eighth division. This estimate does not take into consideration the present large practice of using one room by two schools in grades below the third grade. Should, for reasons given in former reports, each school have the sole use of one room, the need as to additional accommodation would be very much greater to accommodate the ordinary enrollment in the schools; and yet greater, if any measures should be taken with view to the enrollment of the entire school population. Accommodation, in its character, should insure every facility for full and efficient training, and, in its extent, should embrace every unit of the school population.

G. F. T. COOK,
Superintendent.

The BOARD OF TRUSTEES OF PUBLIC SCHOOLS.

STATISTICS.

TABLE I.—*Showing the number of half-day schools of each grade in the seventh and eighth divisions, and buildings in which they are located.*

	First grade.	Second grade.	Third grade.	Fourth grade.	Fifth grade.	Sixth grade.	Total.
Stevens	7	5					12
Magruder	3	3					6
Wormley	2	2					4
Garnet	3	2	3				8
Tenth and R streets	1	1					2
Eleventh and R streets	1	1					2
Proctor	4	3	1				8
P street	1	1					2
Banneker	5	2	3	1	1		12
Miller	1	1					2
Lincoln	3	3					6
Randall	6	4	4	2	1	1	18
Anthony Bowen	3	3					6
Total	40	31	11	3	2	1	88

TABLE II.—*Showing the number of school-buildings and school-rooms owned and rented during each year since* 1864.

Year.	Buildings.			Rooms.			Year.	Buildings.			Rooms.		
	Owned.	Rented.	Total.	Owned.	Rented.	Total.		Owned.	Rented.	Total.	Owned.	Rented.	Total.
1864	....	1	1	....	1	1	1877	9	3	12	80	7	87
1865	1	....	1	4	....	4	1878	9	4	13	76	21	97
1866	1	....	1	4	....	4	1879	9	6	15	76	23	100
1867	1	....	1	4	....	4	1880	9	6	15	78	24	102
1868	7	....	7	42	....	42	1881	9	6	15	78	24	102
1869	8	2	10	54	2	56	1882	9	3	12	87	19	106
1870	8	2	10	56	2	58	1883	9	3	12	87	19	106
1871	8	7	15	56	9	65	1884	10	2	12	95	15	110
1872	9	3	12	72	4	76	1885	10	2	12	95	15	110
1873	9	5	14	78	8	86	1886*	12	4	16	114	17	131
1874	9	4	13	76	8	84	1887	11	4	15	112	17	129
1875	9	4	13	76	8	84	1888	13	9	22	129	28	157
1876	9	5	14	76	9	85	1889	13	8	21	129	27	156

* Building owned by first six divisions given up at end of the school year.

TABLE III.—*Showing whole number of pupils enrolled in the seventh and eighth divisions in each grade, and per cent. of enrollment for the school years* 1887–'88, *and* 1888–'89, *with increase and decrease.*

Grade.	1887–'88.		1888–'89.			
	Whole enrollment.	Per cent.	Whole enrollment.	Per cent.	Increase.	Decrease.
Normal School	40	.36	40	.36	.....	.....
High School	361	3.27	416	3.72	55	.....
Eighth grade	225	2.04	269	2.41	44	.....
Seventh grade	308	2.79	314	2.81	6	.....
Sixth grade	460	4.17	629	5.63	169	.....
Fifth grade	854	7.73	799	7.15	.....	55
Fourth grade	1,013	9.18	1,000	8.95	.....	13
Third grade	1,481	13.40	1,446	12.95	.....	35
Second grade	2,070	18.75	2,007	17.97	.....	63
First grade	4,228	38.30	4,250	38.05	22	.....
Total	11,040	100.00	11,170	100.00	.....	.....
SUMMARY.						
Normal and High Schools	401	3.63	456	4.08	.....	.....
Grammar schools	1,847	16.73	2,011	18.00	.....	.....
Primary schools	8,792	79.64	8,703	77.92	.....	.....
Total	11,040	100.00	11,170	100.00	.....	.....

TABLE IV.—*Showing whole number of pupils enrolled by grades in the seventh and eighth divisions for the school year ending June 30, 1889.*

Grade.	Seventh division.	Eighth division.	Total.
First grade	1,674	2,576	4,250
Second grade	904	1,103	2,007
Third grade	610	836	1,446
Fourth grade	438	562	1,000
Fifth grade	445	354	799
Sixth grade	260	369	629
Seventh grade	207	107	314
Eighth grade	126	143	269
Total	4,664	6,050	10,714
High School			416
Normal School			40
Total			11,170

TABLE V.—*Showing the absolute and relative growth of the High School of the seventh and eighth divisions, from 1880–'81 to 1888–'89, inclusive.*

Years.	Number enrolled in all grades, excluding Normal School.	Number enrolled in the High School.	Per cent. of enrollment in High School on enrollment in all grades, excluding Normal School.	Teachers in all grades, excluding Normal School teachers.	Teachers in High School.	Per cent. of teachers in High School on number of teachers in all grades, excluding those in Normal School.	Number of graduates from High School.
1880–'81	8,146	75	.9	134	3	2.2	12
1881–'82	8,289	90	1.1	143	3	2.1	9
1882–'83	8,710	114	1.3	147	3	2.0	(*)
1883–'84	9,167	127	1.4	154	4	2.6	13
1884–'85	9,598	172	1.8	162	4	2.5	28
1885–'86	10,138	247	2.4	174	6	3.4	33
1886–'87	10,345	276	2.7	182	8	4.4	39
1887–'88	11,000	361	3.3	188	9	4.8	51
1888–'89	11,130	416	3.7	197	11	5.5	67

*No graduating class.

TABLE VI.—*Showing attendance, etc.*
SEPTEMBER.

Grade.	Whole number enrolled.	Average number enrolled.	Average number in daily attendance.	Percentage of attendance.	Schools.	Teachers employed (unassigned, 2).	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Pupils to school based on— Whole enrollment.	Pupils to school based on— Average enrollment.
Normal School	40	40	40	99.5	1	.5	1	0	0	.....	.....
High School	393	341	340	98.0	1	11	2	0	0	.....	.....
Seventh division	4,176	3,893	3,816	98.0	79	*78	33	2	0	53	49
Eighth division	5,326	5,037	4,930	97.8	95	*98	31	0	0	56	53
Special teachers	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....
Total	9,935	9,311	9,126	.....	176	201	67	2	.....	.....	.....

*Including one supervising principal.

TABLE VI.—*Showing attendance, etc.*—Continued.

OCTOBER.

Grade.	Whole number enrolled.	Average number enrolled.	Average number in daily attendance.	Percentage of attendance.	Schools.	Teachers employed (unassigned, 2).	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Pupils to school based on— Whole enrollment.	Pupils to school based on— Average enrollment.
Normal School	40	40	39	97.2	1	5	.....	.....	.....	.....	.....
High School	367	357	341	95.4	1	11	7	.....	.....	.....	.....
Seventh division	4,404	4,248	4,018	96.0	79	*76	300	13	1	56	54
Eighth division	5,473	5,323	5,134	97.3	97	*100	172	5	.....	56	55
Special teachers	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....
Total	10,284	9,968	9,531	.....	178	201	479	18	1	.....	.....

NOVEMBER.

Normal School	40	40	39	97.8	1	5	2	.....	.....	.....	.....
High School	366	360	341	94.6	1	11	32	.....	.....	.....	.....
Seventh division	4,250	4,143	3,910	94.3	79	*76	377	8	1	.....	.....
Eighth division	5,380	5,253	5,010	94.8	97	*100	222	6	.....	.....	.....
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	10,036	9,796	9,300	.....	178	202	633	14	1	.....	.....

DECEMBER.

Normal School	40	40	39	98.2	1	5	.....	.....	.....	.....	.....
High School	358	358	333	92.8	1	11	19	.....	.....	.....	.....
Seventh division	4,098	4,033	3,794	94.0	79	*76	324	6	.....	54	52
Eighth division	5,187	5,068	4,795	94.5	97	*100	160	3	.....	53	52
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	9,683	9,499	8,961	.....	178	202	503	9	.....	.....	.....

JANUARY.

Normal School	40	40	39	39.0	1	5	5	.....	.....	.....	.....
High School	358	349	325	93.0	1	11	18	.....	.....	.....	.....
Seventh division	3,996	3,907	3,674	94.3	79	*76	321	14	2	51	49
Eighth division	5,100	4,981	4,723	94.8	97	*100	247	7	.....	53	51
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	9,494	9,277	8,761	.....	178	202	591	21	2	.....	.....

FEBRUARY.

Normal School	40	40	39	97.3	1	5	.....	.....	.....	.....	.....
High School	347	328	300	91.5	1	11	17	.....	.....	.....	.....
Seventh division	3,873	3,776	3,533	93.5	79	*76	239	6	2	49	48
Eighth division	5,013	4,915	4,624	94.0	97	*100	212	11	.....	52	51
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	9,273	9,059	8,496	.....	178	202	468	17	2	.....	.....

*Including one supervising principal.

TABLE VI.—*Showing attendance, etc.*—Continued.

MARCH.

Grade.	Whole number enrolled.	Average number enrolled.	Average number in daily attendance.	Percentage of attendance.	Schools.	Teachers employed (unassigned, 2).	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.	Pupils to school based on— Whole enrollment.	Pupils to school based on— Average enrollment.
Normal School	40	40	39	98.6	1	5	.....	.....	.....	.....	.....
High School	333	327	296	90.4	1	11	8	.....	.....	.....	.....
Seventh division	3,767	3,709	3,446	92.9	80	*76	229	2	.....	47	46
Eighth division	4,938	4,763	4,452	93.4	99	*100	131	3	.....	50	48
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	9,078	8,839	8,233	.....	181	202	368	5	.....	.....	.....

APRIL.

Normal School	40	39	37	93.3	1	5	.....	.....	.....	.....	.....
High School	328	311	277	89.1	1	11	12	.....	.....	.....	.....
Seventh division	3,652	3,603	3,308	91.8	80	*76	173	2	.....	46	45
Eighth division	4,689	4,632	4,274	92.3	99	*100	92	.....	1	46	46
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	8,709	8,585	7,896	.....	181	202	277	2	1	.....	.....

MAY.

Normal School	40	39	38	98.1	1	5	.....	.....	.....	.....	.....
High School	315	300	268	89.4	1	11	14	.....	.....	.....	.....
Seventh division	3,573	3,480	3,236	92.9	80	*76	193	4	.....	45	44
Eighth division	4,571	4,422	4,167	94.2	99	*100	103	.....	1	46	45
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	8,499	8,241	7,709	.....	181	202	310	4	1	.....	.....

JUNE.

Normal School	40	40	40	99.5	1	5	.....	.....	.....	.....	.....
High School	302	300	295	98.1	1	11	3	.....	.....	.....	.....
Seventh division	3,403	3,379	3,237	95.8	80	*76	108	2	.....	43	42
Eighth division	4,339	4,278	4,105	95.9	99	*100	61	.....	.....	44	42
Special teachers	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total	8,084	7,997	7,677	.....	181	202	172	2	.....	.....	.....

* Including one supervising principal.

TABLE VII.—*Showing attendance, etc., by months, for the year.*

Year 1888-'89.	Whole number of pupils enrolled.	Average number of pupils enrolled.	Average number of pupils in daily attendance.	Percentage of attendance.	Teachers employed.	Cases of tardiness.	Cases of corporal punishment.	Pupils dismissed.
September	9,935	9,311	9,126	97.9	201	67	2	.....
October	10,284	9,968	9,531	96.2	201	479	18	1
November	10,036	9,796	9,300	94.6	202	633	14	1
December	9,683	9,499	8,961	94.3	202	503	9	.....
January	9,494	9,277	8,761	94.4	202	591	21	2
February	9,273	9,059	8,496	93.8	202	* 468	17	2
March	9,078	8,839	8,233	93.1	202	368	5	.....
April	8,709	8,585	7,896	91.9	202	277	2	1
May	8,499	8,241	7,709	93.5	202	310	4	1
June	8,084	7,997	7,677	95.9	202	172	2	.....
Total						3,868	94	8

List of school-houses owned, with their respective locations, and with the number of rooms in each.

Division.	Name of building.	Location of building.	Number of rooms.
7	Sumner	Seventeenth and M streets, northwest	10
7	Stevens	Twenty-first street, between K and L streets, northwest	19
7	Magruder	M street, between Sixteenth and Seventeenth streets, northwest	8
7	Garnet	U street, between Vermont avenue and Tenth street, northwest	12
7	Wormley	Prospect street, between Thirty-third and Thirty-fourth streets, northwest.	8
7	Chamberlain	East street, Georgetown	8
8	John F. Cook	O street, between Fourth and Fifth streets, northwest	11
8	Banneker	Third street, between K and L streets, northwest	8
8	Lincoln	Second and C streets, southeast	11
8	Lovejoy	Twelfth and D streets, northeast	6
8	Randall	First and I streets, southwest	12
8	Anthony Bowen	Ninth and E street, southwest	8
8	Giddings	G street, between Third and Fourth streets, southeast	8

* Only two fit for use.

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